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249 Vanderbilt Avenue Norwood, MA 02062 T: 781.278.3700 F: 781.278.5701 F: 781.278.5702 www.gza.com September 27, 2021 File No. 01.0175290.00

Mr. John Lopez Conservation Agent City of Amesbury Conservation Commission 39 South Hunt Road Amesbury, Massachusetts 01913

Re: Addendum to Notice of Intent for 54 Lake Attitash Road (DEP File #002-1283)

54 Lake Attitash Road Amesbury, Massachusetts

Dear Mr. Lopez:

On behalf of Mr. Robert Manseau, GZA GeoEnvironmental, Inc. (GZA) is pleased to submit this addendum to the Notice of Intent application for 54 Lake Attitash Road (DEP File #002-1283) in the City of Amesbury, Massachusetts. This addendum addresses comments provided by the Amesbury Conservation Commission during the public hearing on May 3, 2021.

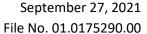
PROJECT BACKGROUND

GZA understands that the Amesbury Conservation Commission requested the applicant revise the existing Notice of Intent application for improvements to the property at 54 Lake Attitash Road. GZA further understands, from review of the NOI application submitted by Atlantic Engineering & Survey Consultants, Inc, dated June 22, 2021, that the applicant is proposing to construct a new segmented retaining wall along the top of slope, install a pervious paver patio and walkways between the existing home and the top of slope, replace the existing wooden stairway to the dock with granite steps and to request a waiver of the Amesbury Wetland Regulations for a new pervious paver walkway, new aluminum fence and for the lawfully existing dock structure. The proposed improvements are within the City's 25-foot No Disturb Zone to the Bank of Lake Attitash, Bank resource area and the 100-foot Buffer Zone to Lake Attitash.

GZA also understands that the Conservation Commission provided several verbal comments to the applicant and Atlantic Engineering regarding construction of new impervious features within the 25-foot No Disturb Zone. Specifically with regard to the addition of the retaining wall near the top of slope and the construction of a patio between the home and the top of slope. GZA was not requested to verify the existing Bank resource area boundary limits.

SITE LOCATION AND DESCRIPTION

The Site is located on a 0.24-acre parcel owned by Mr. Robert Manseu. The Site includes a single-family home bounded by Lake Attitash to the west, a single-family residence to the north, Lake Attitash Road to the east and a single-family residence to the south. The Site includes a split rail fence enclosed side yard along the east and south side, a narrow backyard along the west side that includes a naturalized slope along the bank of Lake Attitash (See **Figure 1**, attached and **Attachment B - Photos**). A set of wood stairs leads down the slope to an existing dock within the lake. A stone wall with a variable height of approximately 24 to 34 inches, runs along the toe of the slope and adjacent to the bank of Lake Attitash. Several stones that appear to have once been in the wall were observed adjacent to the wall on the uphill/slope side.





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INSTALLATION OF PERVIOUS PAVER PATIO AND WALKWAY TO DOCK STAIRS

The area of the proposed patio contains packed dirt and patches of grass and is a high traffic area by pedestrians. Mr. Manseu is concerned about erosion from the foot traffic and is proposing to install pervious pavers to resist erosion of the grass and dirt and provide a more stable surface for foot traffic. The proposed patio will utilize pervious pavers to allow for infiltration of rainwater and snowmelt; grass will be allowed to grow. The prior proposed limits extended the patio between the home and the top of slope; per the Commission's request, this portion of the proposed new patio has been eliminated and the patio extent has been pulled back to be in line with the lakeside limit of the house (see **Attachment C – Permit Plans** for the area of proposed patio and **Attachment D – Example Materials** for a brochure of proposed pavers to be installed). Approximately 755 SF of the 100-foot buffer zone will be impacted by the proposed patio. The paving stones will be laid in a manner to preserve the 20-inch oak tree in place and a cutout for the 16-inch pine tree has been made to save the root system within the drip line. In addition, a stone fire pit is proposed to be constructed on top of the pervious pavers.

A 2-foot-wide walkway from the edge of the patio to the top of the wood stairs to the dock is proposed to impact approximately 29 SF; currently the area consists of worn grass and packed dirt (see **Attachment B – Photos** for site photos and **Attachment C – Permit Plans** for proposed walkway location). The proposed pervious paver walkway will attenuate cumulative erosion of this area and allow for safer access to the top of the stairs.

RECONSTRUCTION OF DOCK STAIRS

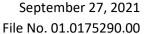
The project proposes to reconstruct the existing temporary wood stairs that lead to the existing dock. The temporary wood stairs were installed to replace the existing degraded stairs that were a structural safety issue. Regular ice jams, formed during spring thaw conditions, push the ice up onto the stairs and create an unsafe passage down the slope to the dock. In addition, the ice had dislodged the prior stair components making them unstable. The project proposes to impact approximately 48 SF of Buffer Zone to replace the temporary wood stairs with granite flagstone steps overlain on a crushed gravel base to allow for infiltration of stormwater (see **Attachment C – Permit Plans** for the area of proposed stair replacement and **Attachment D – Example Materials** for the proposed granite stairs). The steps will be installed through the removal of the existing temporary wooden steps, removal of prior stair retaining wall and stone materials, removal of accumulated sediment within the footprint of the existing stair area, installation of base gravel and installation of stone step so the top elevation is flush with the former wood and dirt stair invert. The lowest stone stair step is proposed to impact 3.5-linear feet of Bank along Lake Attitash (see **Attachment B – Photos** for existing condition).

RECONSTRUCTION OF EXISTING RETAINING WALL

The project proposes to reconstruct the existing stone retaining wall along the toe of slope using modern materials to provide structural stability to the Bank of the lake and prevent erosion of the shoreline from winter ice jams and summer wave action by wind events and storms. The proposed wall will utilize a "Fat Face Gravity Wall" (see **Attachment C – Permit Plans** for the area of wall reconstruction and see **Attachment D – Example Materials** for product brochure for the proposed retaining wall materials). The existing wall is variable in width and height due to deterioration but maintains a variable width of 12-18 inches wide by 24 – 34 inches high. The reconstructed wall will replace the stone wall with a 16-inch wide by 30-inch-high wall that does not require a footing or foundation; the proposed wall would temporarily impact approximately 130 SF for its entire length on the property for reconstruction purposes. No new impacts to Bank or the 25-foot No Disturb / 100-foot Buffer Zone are proposed. Areas of temporary disturbance will be restored using a native seed mix and plantings as part of the proposed Buffer Garden.

INSTALLATION OF STEEL FENCE

A 4-foot-high Bradford aluminum rail fence is proposed along the top of slope to prevent pedestrians, especially children, from accidentally falling down the slope and potentially into the lake. The fence will allow for the passage of local wildlife and floodwater (see **Attachment C – Permit Plans** for the area of proposed installation and **Attachment D – Example Materials** for the product brochure).





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RELOCATION OF EXISTING SHED

An existing storage shed, located along the west face of the split rail fence near Lake Attitash Road, is proposed to be relocated 3-feet further to the northeast (closer to the road) to accommodate the proposed pervious paver patio (see **Attachment C – Permit Plans** for the proposed shed relocation). In addition, three dark American arborvitaes will be planted along the east side of the shed to provide a vegetative screen.

CREATION OF BUFFER GARDEN

The project proposes to convert the existing slope to the Lake into a Buffer Garden with native seed and plantings. The conversion will include the hand removal and treatment of existing invasive species, including a small knotweed (*Polygonum cuspidatum*) along the north side of the slope. The remaining areas of the slope will be similarly treated using hand removal methods and selective use of an herbicide for spot treatment of non-native plants. Existing trees and shrubs will remain in place. Removal of undesirable plants will then commence prior to soil preparation, addition of seed and plants and top dressing with weed-free straw or other temporary site stabilizing materials (see **Attachment C – Permit Plans** for the proposed buffer garden details). Watering will be required during the growing season when natural rainfall is below one inch per week, for the first month after installation. Installation of plantings will be overseen by either a landscaping or nursery specialist; watering will be required every week for the first month Grading or other large soil disturbance is not proposed as part of the Buffer Garden creation.

Members of the Conservation Commission provided recommendations for plantings and seed mix, to include the following species:

Shrubs for the slope area:

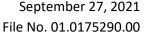
- Rhododendron periclymenoides Pinxter Azalea
- Ilex glabra Inkberry
- Clethra alnofolia Sweet pepperbush
- Vaccinium angustifolium Low-bush Blueberry
- Cornus canadensis- Bunchberry
- Juniper horizontalis- Creeping Juniper

Shrubs will be interspersed with a native conservation wildflower mix to be supported by the following individual plantings to promote self-seeding:

- Eupatorium rugosum White Snakeroot
- Symphyotrichum pilosum Heath Aster
- Lobella cardinalis Cardinal flower
- Schizachyrium scoparium Little Bluestem
- Carex pensylvanica Pennsylvania Sedge
- Rudbeckia hirta Black-eyed Susan
- Sisyrinchium Blue eyed grass

WETLANDS PROTECTION ACT APPLICABILITY

The proposed project activities qualify as minor activities within the buffer zone under 310 CMR 10.02(2)(b)(2)(b), (d) and (e) and will comply with performance standards for Bank resource area.





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WPA BANK RESOURCE AREA PERFORMANCE STANDARDS

310 CMR 10.54(4)(a): The physical stability of the Bank.

The proposed stone step will replace the existing temporary wood stairs, which in turn replaced the failed and structurally unstable tiered wood and dirt steps. The physical stability of the Bank within the area of lowest stone stair reconstruction will be improved through structural stabilization of the slope provided by the stone. In addition, the stone step will mitigate erosion of the Bank during storm events and winter / spring ice jams.

310 CMR 10.54(4)(b): The water carrying capacity of the bank and the existing channel within the bank.

The water carrying capacity of the Bank is not anticipated to be negatively affected by the addition of the stone step, as the stone will be placed to match the existing elevation of the surrounding slope. Installation would require removal of the existing temporary wood stairs, removal of the remnants of the former wood and dirt tiered stairs, over excavation of the base of the stone slab to accommodate installation of the base drainage stone, and placement of the stone in line with the pre-existing elevation. Void spaces within the base drainage stone would provide additional water carrying capacity within the Bank.

310 CMR 10.54(4)(c): Ground water and surface water quality.

The surface water quality of Lake Attitash is anticipated to improve with the addition of the stone step through the stabilization of sediment on the Bank and adjacent slope. Stabilization of the Bank through the addition of slope protection (the proposed stone step) is anticipated to mitigate movement of sediment into the Lake from strong wind / wave events and winter / spring ice jam buildup. Groundwater quality is anticipated to be unaffected as the improvements are located above the existing groundwater table.

310 CMR 10.54(4)(d): The capacity of the Bank to provide breeding habitat, escape cover, and food for fisheries/wildlife.

The capacity of the Bank to provide breeding habitat, escape cover and food for fish/wildlife in the area of the stone step is anticipated to increase due to the reduction in erosion of the Bank and surrounding slope from ice jam and wave action. In addition, creation of the Buffer Garden immediately adjacent to the proposed stone stair, where rainfall will be allowed to infiltrate, will promote growth of vegetation to help anchor the soils and further stabilize the slope.

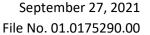
310 CMR 10.54(4)(e): The capacity of the Bank to provide important wildlife habitat functions.

The total permanent impacts include approximately 3.5 linear feet of Bank due to placement of the lowest stone step. The Bank impact is less than the allowed performance standard under 310 CMR 10.54(4). Removal of the temporary wood stairs will allow for unrestricted access across the Bank for local wildlife, providing a functional lift for access over existing conditions.

AMESBURY INLAND BANK RESOURCE AREA PERFORMANCE STANDARDS

AWR 18.2(d)(1): A proposed project shall not cause any adverse effect or cumulative adverse effect upon the wetland values of Inland Bank or Inland Beach.

The project proposes to replace the existing temporary wood stairs with stone steps that will allow the infiltration of rainwater and passage of wildlife across the stair area. In addition, the stone steps will help to attenuate erosion of the bank and slope from wave action and ice jam events that currently occur. Such past events have eroded the bank and degraded the existing slope. In addition, the removal of the wood stairs and replacement with stone steps will





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limit the overall footprint of the stair area and allow for reclamation of the bank and slope by native plantings associated with the Buffer Garden, providing additional wildlife habitat.

AWR 18.2(d)(2): A proposed project shall be permitted only if there is no adverse effect on bank stability, bank height, ground water and surface water quality, the water carrying capacity of an existing channel within a bank, and the capacity of the bank to provide habitat for fisheries and/or wildlife.

The physical stability of the Bank in the area of the stone stair reconstruction will be improved through structural stabilization of the slope that will also mitigate erosion of the Bank during storm events and winter / spring ice jams. Stabilization of the Bank through the addition of slope protection (the proposed stone step) is anticipated to mitigate erosion of the slope and transport of sediment into the Lake from strong wind / wave events and winter / spring ice jam buildup. Groundwater quality is anticipated to be unaffected as the improvements are located above the existing groundwater table. The capacity of the Bank to provide breeding habitat, escape cover and food for fish/wildlife in the area of the stone step is anticipated to increase due to the reduction in erosion of the Bank and surrounding slope from ice jam and wave action. In addition, creation of the Buffer Garden immediately adjacent to the proposed stone stair, where rainfall will be allowed to infiltrate, will promote growth of vegetation to help anchor the soils and further stabilize the slope.

AWR 18.2(d)(3): Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established pursuant to 310 CMR 10.59.

The project is not located within mapped NHESP Estimated Habitats of Rare Wildlife or Priority Habitats of Rare Species.

AMESBURY BUFFER ZONE RESOURCE AREA PERFORMANCE STANDARDS

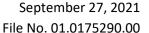
AWR 20.0(d)(1): The intent of the Conservation Commission is to move all structures and activities as far away as possible from any Resource Area, in order to protect the wetland values of Resource Areas

Mr. Manseau has revised this application per comments received from the Conservation Commission and has made the following adjustments:

- The pervious paver patio has been removed from the 25-foot No Disturb Zone;
- The new retaining wall at the top of slope has been removed and replaced with an aluminum fence that allows for the passage of wildlife and floodwaters;
- The proposed reconstructed retaining wall at the toe of slope will remain within the footprint of the existing stone wall and not expand in size;
- The proposed Buffer Garden will incorporate native plant species as recommended by Conservation Commission members

Additional project activities, including reconstruction of the existing stairs to the dock, are unable to be moved out of the buffer zone due to the existing conditions (located within buffer zone). The proposed pervious paver walkway is also unable to be relocated due to nature of the location of the existing path to the dock stairs.

AWR 20.0(d)(2): Except as otherwise specified, Resource Area buffers shall be retained and maintained in a naturally vegetated condition. Where buffer disturbance has occurred during construction, revegetation with native vegetation may be required.





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The project proposes the creation of a Buffer Garden on the existing slope to the Lake using native species plantings as recommended by Conservation Commission members. In addition, creation of the Buffer Garden will require removal of existing invasive species on the slope, providing an increase in wildlife habitat value. Areas of temporary disturbance will be restored using a native conservation / wildlife seed mix and stabilized using weed-free straw as required.

The decrease in size of the pervious paver patio will allow the Site to maintain additional areas of vegetation between the home and the top of slope, allowed for increased infiltration of stormwater and retention of sediment.

AWR 20.0(d)(3): The Commission may require that already-altered buffer zone be restored in order to protect or improve Resource Area values. Restoration means planting native vegetation, grading, correcting site drainage, removing debris, or other measures which will improve, restore and protect the wetland values of the Resource Area.

The proposed Buffer Garden will remove existing invasive species and restore the slope with native plant species. In addition, several native plantings will occur throughout the property, outside of the 25-foot No Disturb Zone, at the recommendation of Commission members.

Installation of the proposed pervious paver walkway to the dock stairs will help attenuate cumulative erosion of the grassed slope in the area and promote natural revegetation.

Reconstruction of the stone wall will remove non-native materials associated with the original installation of the wall. Reconstruction of the dock stairs will allow for removal of the temporary wood stairs and tiered wood and dirt gardening beds and replace with native plantings.

AWR 20.0(d)(4): Notwithstanding the above provisions, no project may be permitted which will have any adverse effect on specified habitat of rare vertebrate or invertebrate and rare plant species, as identified by procedures established pursuant to 310 CMR 10.59.

The project is not located within mapped NHESP Estimated Habitats of Rare Wildlife or Priority Habitats of Rare Species.

REQUEST FOR VARIANCE FROM THE AMESBURY WETLAND REGULATIONS

Mr. Manseau requests a variance from the Amesbury Wetland Regulations (AWR 21.4 – Piers) for the existing dock off the edge of his property in Lake Attitash. The dock has an existing, approved Chapter 91 License (see **Attachment E – AWR Waiver Request** for a copy of the license and waiver request) for this structure.

In addition, Mr. Manseau requests a variance from the Amesbury Wetland Regulations (AWR 21.3 – Landscaping) for the proposed addition of the pervious paver walkway to the top of the existing stairs to the dock. The pervious paver walkway will reduce cumulative erosion impacts to the 25-foot No Disturb Zone through stabilization of soils. In addition, creation of the walkway will be completed with pavers to allow for infiltration of rainwater (see **Attachment E – AWR Waiver Request**). In addition, Mr. Manseau also requests a variance under AWR 21.3 for installation of the aluminum fence along the top of slope, to provide protection from accidental falls down the slope by young children. The fence will allow for the passage of wildlife and floodwaters.

CONCLUSIONS

GZA has reviewed and assessed the project activities Subject to Protection and/or Jurisdiction under the Massachusetts Wetlands Protection Act, the MassDEP Water Quality Certification, the federal Clean Water Act and the Amesbury Wetland Regulation Bylaw on or within 100 feet of Lake Attitash. Proposed impacts will be limited to the Bank of Lake Attitash, the 100-foot Buffer Zone and the Amesbury 25-foot No Disturb Zone. See Table 1 – Summary of Total Area Impacts, below.



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Table No. 1 - Summary of Total Area Impacts

Resource Area Impact	Reconstructed Wall	Pervious Paver Patio	Pervious Paver Walkway	Stairs to Existing Dock	Total Impacts to 100-foot Buffer Zone	Total Impacts to 25-foot No- Disturb Zone
25-foot No Disturb Zone	130 SF (temp)		29 SF	48 SF		130 SF (temp) 77 SF (perm)
100-foot Buffer Zone	130 SF (temp)	755 SF	29 SF	48 SF	130 SF (temp) 832 SF (perm)	
Bank				3.5 linear feet		

In addition, conversion of the existing slope area to a Buffer Garden, including treatment and removal of invasive species and installation of native shrubs and herbaceous plantings, would improve the wildlife habitat function of the slope and provide for additional pollinator habitat along the shoreline of Lake Attitash. Please contact Kimberly Degutis at GZA at (781) 278-5852 if you have any questions or require additional information regarding this application. We look forward to working with the Conservation Commission during the permitting process.

Consultant/Reviewer

Sincerely,

GZA)GEOENVIRONMENTAL, INC.

Kimberly/K. Deguti/s, PWS, CESCL

Senior Project Manager

Stephen L. Lecco, A.I.C.P., C.E.P.

Associate Principal

Attachments: WPA-3 Form

Figure 1 – Site Locus

Attachment A – Limitations

Attachment B - Representative Site Photographs

Attachment C - Permit Plan

Attachment D – Example Materials Attachment E – AWR Waiver Request Attachment F – Original NOI Application



WPA-3 Form



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

Amesbury

City/Town

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

54 Lake Attitash Road	Amesbury	01913
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	42.851107	-70.973669
_	d. Latitude	e. Longitude
59	22	
f. Assessors Map/Plat Number	g. Parcel /Lot Numb	per
Applicant:		
Robert	Manseau	
a. First Name	b. Last Name	
Manseau Family Revocable T	rust	
c. Organization		
54 Lake Attitash Road		
d. Street Address		
AMESBURY	MA	01913
e. City/Town	f. State	g. Zip Code
978-807-9651	robertmanseau@co	mcast.net
h. Phone Number i. Fax N		
c. Organization		
c. Organization d. Street Address		
-	f. State	g. Zip Code
d. Street Address		g. Zip Code
d. Street Address e. City/Town		g. Zip Code
d. Street Address e. City/Town h. Phone Number i. Fax N Representative (if any):	Number j. Email address	g. Zip Code
d. Street Address e. City/Town h. Phone Number i. Fax N		g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly	J. Email address Degutis	g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name	J. Email address Degutis	g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc	J. Email address Degutis	g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave	J. Email address Degutis	g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address	J. Email address Degutis	g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address Norwood	j. Email address Degutis b. Last Name	
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address Norwood e. City/Town	j. Email address Degutis b. Last Name MA f. State	02062 g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address	j. Email address Degutis b. Last Name MA f. State kimberly.degutis@g	02062 g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address Norwood e. City/Town 781-278-5852 h. Phone Number i. Fax N	j. Email address Degutis b. Last Name MA f. State kimberly.degutis@g	02062 g. Zip Code
d. Street Address e. City/Town h. Phone Number Representative (if any): Kimberly a. First Name GZA GeoEnvironmental Inc c. Company 249 Vanderbilt Ave d. Street Address Norwood e. City/Town 781-278-5852 h. Phone Number i. Fax N	j. Email address Degutis b. Last Name MA f. State kimberly.degutis@g j. Email address	02062 g. Zip Code



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Amesbury

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Α.	General Information (continued)					
6.	6. General Project Description: Reconstruction of existing stone retaining wall, installation of pervious paver patio and walkway, installation of steel fence and reconstruction of existing wood stairs.					
7a.	a. Project Type Checklist: (Limited Project Types see Section A. 7b.)					
	1. Single Family Home	2. Residential Subdivision				
	3. Commercial/Industrial	4. Dock/Pier				
	5. Utilities	6. Coastal engineering Structure				
	7. Agriculture (e.g., cranberries, forestry)	8. Transportation				
	9. Other					
7b.						
	2. Limited Project Type					
	If the proposed activity is eligible to be treated as ar CMR10.24(8), 310 CMR 10.53(4)), complete and at Project Checklist and Signed Certification.					
8.	Property recorded at the Registry of Deeds for:					
	Essex South					
	a. County	b. Certificate # (if registered land)				
	37756 c. Book	d. Page Number				
B.	Buffer Zone & Resource Area Impa	-				
1.	Buffer Zone Only – Check if the project is locate Vegetated Wetland, Inland Bank, or Coastal Re					
2.	Vegetated Wetland, Inland Bank, or Coastal Resource Area. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).					

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.



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B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Resource Area Size of Proposed Alteration Proposed Replacement (if any) 3.5 a. 🖂 Bank 1. linear feet 2. linear feet b. 🗌 **Bordering Vegetated** Wetland 1. square feet 2. square feet с. П Land Under 1. square feet 2. square feet Waterbodies and Waterways 3. cubic yards dredged Resource Area Size of Proposed Alteration Proposed Replacement (if any) d. 🗌 **Bordering Land** 2. square feet Subject to Flooding 1. square feet 3. cubic feet of flood storage lost 4. cubic feet replaced е. П Isolated Land 1. square feet Subject to Flooding 2. cubic feet of flood storage lost 3. cubic feet replaced Riverfront Area 1. Name of Waterway (if available) - specify coastal or inland Width of Riverfront Area (check one): 25 ft. - Designated Densely Developed Areas only ☐ 100 ft. - New agricultural projects only 200 ft. - All other projects 3. Total area of Riverfront Area on the site of the proposed project: square feet 4. Proposed alteration of the Riverfront Area: b. square feet within 100 ft. c. square feet between 100 ft. and 200 ft. a. total square feet 5. Has an alternatives analysis been done and is it attached to this NOI? 6. Was the lot where the activity is proposed created prior to August 1, 1996? ⊠ Yes No 3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Note: for coastal riverfront areas, please complete Section B.2.f. above.



WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:		
MassDEP File Number		
X287694		
Document Transaction Number		
Amesbury		

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your
document
transaction
number
(provided on your
receipt page)
with all
supplementary
information you
submit to the
Department.

4.

5.

Resource Area		Size of Propose	d Alteration	Proposed Replacement (if any)
а. 🗌	Designated Port Areas	Indicate size under Land Under		r the Ocean, below
b. 🗌	Land Under the Ocean	1. square feet		
		2. cubic yards dredg	ged	
с. 🗌	Barrier Beach	Indicate size und	der Coastal Bead	ches and/or Coastal Dunes below
d. 🗌	Coastal Beaches	1. square feet		2. cubic yards beach nourishment
е. 🗌	Coastal Dunes	1. square feet		2. cubic yards dune nourishment
		Size of Propose	d Alteration	Proposed Replacement (if any)
f. 🗌	Coastal Banks	1. linear feet		
g. 🗌	Rocky Intertidal Shores	1. square feet		
h. 🗌	Salt Marshes	1. square feet		2. sq ft restoration, rehab., creation
i. 🗌	Land Under Salt Ponds	1. square feet		
		2. cubic yards dredg	ged	
j. 🗌	Land Containing Shellfish	1. square feet		
k. 🗌	Fish Runs			ks, inland Bank, Land Under the Provider Waterbodies and Waterways,
		1. cubic yards dredo	ged	
l. 🗌	Land Subject to Coastal Storm Flowage	1. square feet		
Restoration/Enhancement If the project is for the purpose of restoring or er square footage that has been entered in Section amount here.				
a. square	square feet of BVW		b. square feet of S	Salt Marsh
☐ Pro	oject Involves Stream Cros	sings		
a. number of new stream crossings			b. number of repla	cement stream crossings



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

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•
MassDEP File Number
X287694
D IT I II
Document Transaction Number
A ma a bum r
Amesbury
City/Town
Only 10 mil

C. (Other	Applicable	Standards	and Red	uirements
-------------	-------	-------------------	------------------	---------	-----------

	This is a proposal for an Ecological Restoration complete Appendix A: Ecological Restoration (310 CMR 10.11).			
Str	eamlined Massachusetts Endangered Spec	ies Act/Wetlands Protection Act Review		
1.	Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated of the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the <i>Massachusetts Natural Heritage Atlas</i> or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm .			
	$_{\text{a.}}$ \square Yes \boxtimes No $$ If yes, include proof of m	nailing or hand delivery of NOI to:		
	9/2021 b. Date of map Natural Heritage and Endition of Fisheries are 1 Rabbit Hill Road Westborough, MA 0158			
	If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).			
	c. Submit Supplemental Information for Endangere	d Species Review*		
	Percentage/acreage of property to be a	altered:		
	(a) within wetland Resource Area	percentage/acreage		
	(b) outside Resource Area	percentage/acreage		
	2. Assessor's Map or right-of-way plan of	site		
2.	Project plans for entire project site, including w wetlands jurisdiction, showing existing and propose tree/vegetation clearing line, and clearly demarcate	ed conditions, existing and proposed		
	(a) Project description (including description buffer zone)	on of impacts outside of wetland resource area &		
	(b) Photographs representative of the site			

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^{*} Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

^{**} MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.



WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

1	Provided by MassDEP:		
	MassDEP File Number		
	X287694		
	Document Transaction Number		
	Ameshury		

City/Town

C. Other Applicable Standards and Requirements (cont'd)

	(c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm).				
	Make o	check payable to "Commonwealth of Mas address	ssachusetts - NHESP" an	d mail to NHESP at	
Projects altering 10 or more acres of land, also submit:					
(d) Vegetation cover type map of site					
	(e)	Project plans showing Priority & Estima	ated Habitat boundaries		
	(f) OF	R Check One of the Following			
	1. Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10 http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.leter the NOI must still be sent to NHESP if the project is within estimated habitat pursual 310 CMR 10.37 and 10.59.)				
	2. 🗌	Separate MESA review ongoing.	a. NHESP Tracking #	b. Date submitted to NHESP	
	3.	Separate MESA review completed. Include copy of NHESP "no Take" dete Permit with approved plan.	rmination or valid Conser	vation & Management	
3.	For coasta line or in a	I projects only, is any portion of the properties fish run?	osed project located belo	w the mean high water	
	a. Not a	applicable – project is in inland resource	area only b. 🗌 Yes	☐ No	
	If yes, inclu	ude proof of mailing, hand delivery, or ele	ectronic delivery of NOI to	either:	
	South Shore - Cohasset to Rhode Island border, and the Cape & Islands:				
	Southeast N Attn: Enviro 1213 Purch New Bedfor	Marine Fisheries - Marine Fisheries Station nmental Reviewer ase Street – 3rd Floor d, MA 02740-6694 F.EnvReview-South@state.ma.us	Division of Marine Fisheric North Shore Office Attn: Environmental Revie 30 Emerson Avenue Gloucester, MA 01930 Email: <u>DMF.EnvRevie</u>	ewer	

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

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Online Users: Include your document transaction number

(provided on your receipt page) with all supplementary information you submit to the Department.

Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

Amesbury

City/Town

C. Other Applicable Standards and Requirements (cont'd)

4.	Is any p	ortion	of the p	proposed project within an Area of Critical Environmental Concern (ACEC)?	
	a. 🗌 Y	es 🗵	☑ No	If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDI Website for ACEC locations). Note: electronic filers click on Website.	ΞP
	b. ACEC				
5.	Is any p			proposed project within an area designated as an Outstanding Resource Water in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?	er
	a. 🛛 Y	es [] No		
6.				ite subject to a Wetlands Restriction Order under the Inland Wetlands c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 10	5)?
	a. 🗌 Y	es 🛭	☐ No		
7.	Is this p	roject	subject	to provisions of the MassDEP Stormwater Management Standards?	
	а. 🗌			copy of the Stormwater Report as required by the Stormwater Management s per 310 CMR 10.05(6)(k)-(q) and check if:	
	1. [pplying f	for Low Impact Development (LID) site design credits (as described in nwater Management Handbook Vol. 2, Chapter 3)	
	2. [_ A	portion	of the site constitutes redevelopment	
	3. [] P	roprietar	ry BMPs are included in the Stormwater Management System.	
	b. 🖂	No. C	heck wh	ny the project is exempt:	
	1.	⊴ s	ingle-far	mily house	
	2. [] E	mergeno	cy road repair	
	3. [or			sidential Subdivision (less than or equal to 4 single-family houses or less that 4 units in multi-family housing project) with no discharge to Critical Areas.	n
D.	Add	ition	al Info	ormation	
				an Ecological Restoration Limited Project. Skip Section D and complete al Restoration Notice of Intent – Minimum Required Documents (310 CMR	
	Applica	nts mu	ıst includ	de the following with this Notice of Intent (NOI). See instructions for details.	
				the document transaction number (provided on your receipt page) for any of ion you submit to the Department.	f
	1.	suffici	ient infor	er map of the area (along with a narrative description, if necessary) containing rmation for the Conservation Commission and the Department to locate the sers may omit this item.)	
	2. 🗌	a Bor	dering V	ring the location of proposed activities (including activities proposed to serve a /egetated Wetland [BVW] replication area or other mitigating measure) relatively of each affected resource area	



E.

Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands WPA Form 3 – Notice of Intent Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

1	Provided by MassDEP:		
	MassDEP File Number		
	X287694		
	Document Transaction Number		
	Ameshury		

City/Town

D.	Additiona	I Information (cont'd)
┏.	Additiona	i iiiioiiiaaaoii (COILLA

Additional Information (cont'd)				
3.	Identify the method for BVW and other resormed Data Form(s), Determination of Applicand attach documentation of the method	ability, Order of Resource		
4. 🛛	List the titles and dates for all plans and oth	er materials submitted with	n this NOI.	
Co	nservation Permit Plan at 54 Lake Attitash R	oad in Amesbury, MA		
a. P	lan Title	-		
	antic Engineering	John Paulson PLS31725 c. Signed and Stamped by 1=10		
	repared By ril 9, 2021 Rev June 22 and Sept 25,			
202	•	e. Scale		
fΔ	dditional Plan or Document Title		g. Date	
5. 🗌	If there is more than one property owner, pl listed on this form.	ease attach a list of these	· ·	
6.	Attach proof of mailing for Natural Heritage	and Endangered Species	Program, if needed.	
7.	Attach proof of mailing for Massachusetts D	Division of Marine Fisheries	, if needed.	
8. 🗵	Attach NOI Wetland Fee Transmittal Form			
9.	Attach Stormwater Report, if needed.			
Fees				
1.	Fee Exempt: No filing fee shall be assessed of the Commonwealth, federally recognized authority, or the Massachusetts Bay Transp	I Indian tribe housing autho		
	nts must submit the following information (in	addition to pages 1 and 2	of the NOI Wetland	
2154 4/13/2021				
	pal Check Number	3. Check date		
2155		4/13/2021		
	Check Number	5. Check date		
Robert	.	Manseau		
6. Payor	name on check: First Name	7. Payor name on check: L	_ast Name	

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WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

Amesbury City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

Robert Transcar	9-21-21
1. Signature of Applicant	2. Date
Signature of Property Owner (if different) Signature of Representative (if any)	4. Date 9/28/2 1 6. Date

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

X284346

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





A. Applican	t Information			
Location of P	Location of Project:			
54 Lake Attita	sh Road	Amesbury		
a. Street Address	3	b. City/Town		
		42.50		
c. Check number		d. Fee amount		
2. Applicant Mai	ling Address:			
Robert		Manseau		
a. First Name		b. Last Name		
Manseau Far	nily Revocable Trust			
c. Organization				
54 Lake Attita	sh Road			
d. Mailing Addres	SS			
Amesbury		MA	01913	
e. City/Town		f. State	g. Zip Code	
978-807-9651		robertmanseau@comcast	:.net	
h. Phone Numbe	r i. Fax Number	j. Email Address		
3. Property Own	er (if different):			
Same				
a. First Name		b. Last Name		
c. Organization				
d. Mailing Addres	SS .			
e. City/Town	_	f. State	g. Zip Code	
h. Phone Numbe	r i. Fax Number	j. Email Address		

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. *Please see Instructions before filling out worksheet.*

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

X284346

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)			
Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
1a work at a single family home	1	1	110.00
	Step 5/T	otal Project Fee:	110.00
	Step 6	/Fee Payments:	
	Total	Project Fee:	110.00 a. Total Fee from Step 5
		e of filing Fee:	42.50 b. 1/2 Total Fee less \$ 12.50
	City/Town shar	e of filling Fee:	67.50 c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

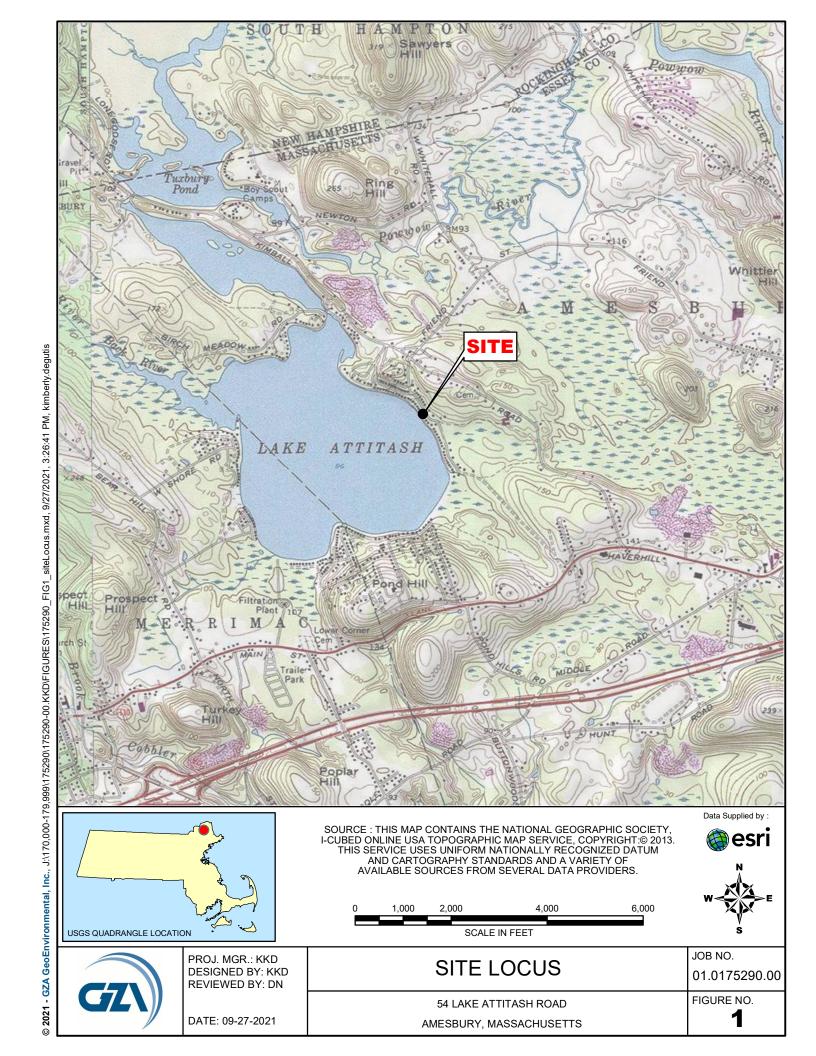
Department of Environmental Protection Box 4062 Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



Figures





Appendix A – Limitations

NATURAL RESOURCE SURVEY AND ASSESSMENT LIMITATIONS



File No. 01.0175290.00 Page | 1 September 2021

USE OF REPORT

1. GZA GeoEnvironmental, Inc. (GZA) has prepared this report on behalf of, and for the exclusive use of Robert Manseau ("Client") for the stated purpose(s) and location(s) identified in the report. Use of this report, in whole or in part, at other locations, or for other purposes, may lead to inappropriate conclusions; and we do not accept any responsibility for the consequences of such use(s). Further, reliance by any party not identified in the agreement, for any use, without our prior written permission, shall be at that party's risk, and without any liability to GZA.

STANDARD OF CARE

- 2. GZA's findings and conclusions are based on the work conducted as part of the Scope of Services set forth in the Report and/or proposal and reflect our professional judgment. These findings and conclusions must be considered not as scientific or engineering certainties, but rather as our professional opinions concerning the data gathered and observations made during the course of our work. Conditions other than described in this report may be found at the subject location(s).
- 3. GZA's services were performed using the degree of skill and care ordinarily exercised by qualified professionals performing the same type of services, at the same time, under similar conditions, at the same or a similar property. No warranty, expressed or implied, is made.

LIMITS TO OBSERVATIONS

- 4. Natural resource characteristics are inherently variable. Biological community composition and diversity can be affected by seasonal, annual or anthropogenic influences. In addition, soil conditions are reflective of subsurface geologic materials, the composition and distribution of which vary spatially.
- 5. The observations described in this report were made on the dates referenced and under the conditions stated therein. Conditions observed and reported by GZA reflect the conditions that could be reasonably observed based upon the visual observations of surface conditions and/or a limited observation of subsurface conditions at the specific time of observation. Such conditions are subject to environmental and circumstantial alteration and may not reflect conditions observable at another time.
- 6. The conclusions and recommendations contained in this report are based upon the data obtained from a limited number of surveys performed during the course of our work on the site, as described in the Report. There may be variations between these surveys and other past or future surveys due to inherent environmental and circumstantial variability.

RELIANCE ON INFORMATION FROM OTHERS

7. Preparation of this Report may have relied upon information made available by Federal, state and local authorities; and/or work products prepared by other professionals as specified in the report. Unless specifically stated, GZA did not attempt to independently verify the accuracy or completeness of that information.

COMPLIANCE WITH REGULATIONS AND CODES

8. GZA's services were performed to render an opinion on the presence and/or condition of natural resources as described in the Report. Standards used to identify or assess these resources as well as regulatory jurisdiction, if any, are stated in the Report. Standards for identification of jurisdictional resources and regulatory control over them may vary between governmental agencies at Federal, state and local levels and are subject to change over time which may affect the conclusions and findings of this report.



NATURAL RESOURCE SURVEY AND ASSESSMENT LIMITATIONS

File No. 01.0175290.00 Page | 2 September 2021

NEW INFORMATION

9. In the event that the Client or others authorized to use this report obtain information on environmental regulatory compliance issues at the site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this work, may modify the conclusions stated in this report.

ADDITIONAL SERVICES

10. GZA recommends that we be retained to provide further investigation, if necessary, which would allow GZA to (1) observe compliance with the concepts and recommendations contained herein; (2) evaluate whether the manner of implementation creates a potential new finding; and (3) evaluate whether the manner of implementation affects or changes the conditions on which our opinions were made.



Appendix B – Representative Site Photographs



Photographic Log

Client Name:

Robert Manseau

Site Location:

54 Lake Attitash Road Amesbury, Massachusetts **Project No.** 01.0175290.00

Photo No.

Date: 8/17/21

Direction Photo Taken:

Northwest



View looking along shoreline to the north of the dock, note stone wall along toe of slope. Also note wood stairs to dock.

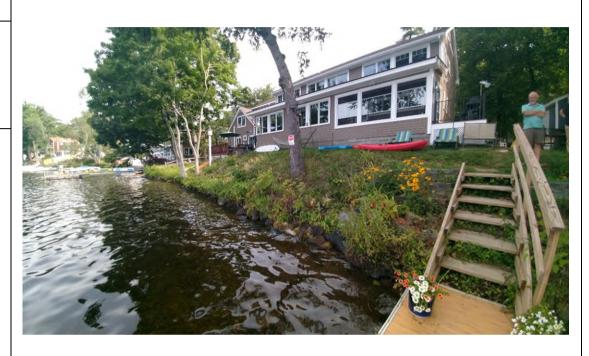


Photo No.

2

Date: 8/17/21

Direction Photo Taken:

Southeast

Description:

View looking along shoreline to the south of the dock, note stone wall along toe of slope. Also note wood stairs to dock.





Photographic Log

Client Name: Robert Manseau Site Location:

54 Lake Attitash Road Amesbury, Massachusetts **Project No.** 01.0175290.00

Photo No.

Date: 8/17/21

Direction Photo Taken:

Northwest

Description:

View along toe of slope. Note stone wall in fore and midground. Also note several stones have fallen from the wall.



Photo No.

4

Date: 8/17/21

Direction Photo Taken:

South

Description:

View along toe of slope showing stone wall.





Photographic Log

Client Name:

Robert Manseau

Site Location:

54 Lake Attitash Road Amesbury, Massachusetts **Project No.** 01.0175290.00

Photo No. 5

Date: 8/17/21

Direction Photo Taken:

East



View towards Lake Attitash Road and area of proposed pervious paver installation.



Photo No.

6

Date: 8/17/21

Direction Photo Taken:

West

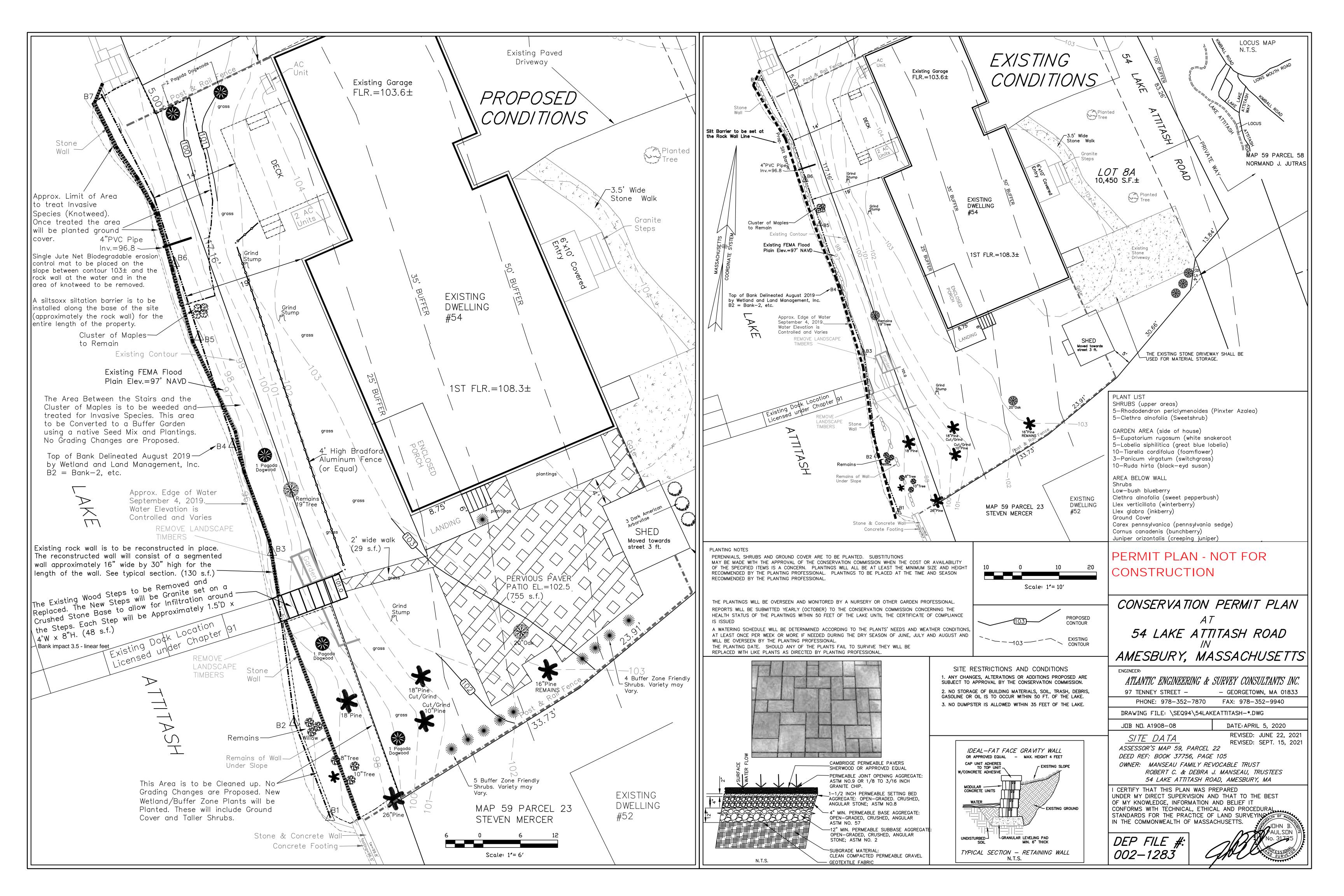
Description:

View facing edge of proposed pervious paver installation and proposed pervious paver walkway towards stairs to dock.





Appendix C – Permit Plan





Appendix D – Example Materials





GATOR AQUA ROCK

PERMEABLE CHIPS MADE EASY



DESCRIPTION

GATOR AQUA ROCK is manufactured to meet ASTM No.9 requirements for permeable paver joint units. The calibrated gradation obtained from the fractured high-strength granite makes it the ideal product for the bedding course & jointing material to collect surface water run-off and help stabilize interlocking paver surfaces.

FEATURES

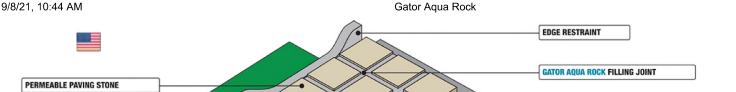
- · Graded to meet ASTM No.9
- · High strength granite stone for long-term use
- Helps collect roof & surface water run-off
- · Helps prevent erosion
- Reduction of storm water rate
- Calibrated for the majority of permeable pavers
- Long-term high infiltration performance
- 2,200 lb Super Sack available for large applications.

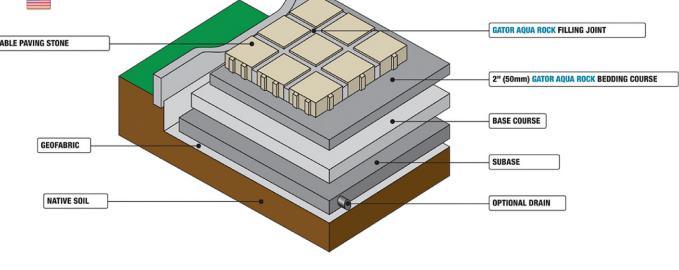
IDEAL FOR

Driveways, Parking Lots, Patios & Walkways Drainage applications Bedding and jointing material Residential and commercial applications

ASTM NO.9

SIEVE SIZE	ASTM NO.9
3/8in. (9.5mm)	100





LIMITED WARRANTY

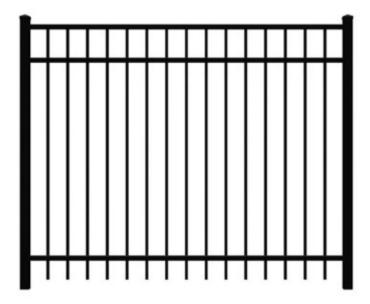
Alliance Designer Products Inc. cannot guarantee results as it has no control over surface preparation and product application. If this product is proven to be defective, on the condition that it was applied pursuant to the required method of application and surface preparation, the sole obligation of Alliance Designer Products Inc. is to refund the purchase price. Proof of purchase is required for any claim. Alliance Designer Products Inc. shall not be liable for any other damages whatsoever, direct or consequential. To the extent permitted by law, Alliance Designer Products Inc. excludes any implied warranty of quality, merchantability or fitness for purpose.

☑ Online Support: sales@fencingdirect.com



📜 My Cart – 0 items

Home / Products / 4' H x 6' W Bradford Aluminum Fence Panel Black





4' H x 6' W Bradford Aluminum Fence Panel Black

BA73002245

\$130.88 \$98.16

(You Save 25%)

4' H x 6' W Bradford Aluminum Fence Panel Black. Featuring a screw-less hidden fastener system, with 1" x 1" rails and 5/8" pickets. Panels can be adjusted for grades and rack up to 33" per 6' panel. Posts sold separately from panels. *Read Full Description...*

Quantity	
----------	--

ADD TO CART

ADD ALL TO CART

PRODUCT DESCRIPTION

PRODUCT FAQ

PRODUCT DOCUMENTS

4' H x 6' W Bradford Aluminum Fence Panel Black. Featuring a screw-less hidden fastener system, with 1" x 1" rails and 5/8" pickets. Panels can be adjusted for grades and rack up to 33" per 6' panel.

Posts sold separately from panels.

Product SKU: BA73002245

HOME

WHY US?









SHERWOOD COLLECTION with APMORTEC®

Virtual Assistant

Each group of Cambridge Shapes and Design Kits with ArmorTec in this collection possesses quality, architectural surface finishes. The Collection is comprised of Ledgestone 3 Pc. Design Kit, Ledgestone 3 Pc. Design Kit and 18 x 18, and QuartzTec™.

Cambridge Products Color Selection Guide

Design Gallery Photos of The Sherwood Collection

Shapes & Available Color Choices:

Shape	Description	Available Colors
	Ledgestone XL 24 x 36 Onyx/Natural shown 24 x 36 Cube Info Card	View Colors
	English	

Landcare Stone Madbury, NH

603-749-9797

Stratham Hill Stone

Stratham, NH

603-431-0088

HOME / SHOP / ALL CATALOG PRODUCTS / NATURAL STONE / GRANITE STEPS & LANDINGS / SPLIT-FACED WOODBURY GRANITE STEPS AND LANDINGS

Split-Faced Woodbury Granite Steps and Landings











RELATED PRODUCTS



Rock-Face Caledonia
Granite Steps and Landings

\$48.76 per sq. ft.

SELECT OPTIONS



Rock-Face Woodbury Granite Steps and Landings

\$52.00 per sq. ft.

SELECT OPTIONS



Antique Granite Steps

\$54.00 per sq. ft.

SELECT OPTIONS

LandCare Associates, Inc.

282 Knox Marsh Rd. Madbury, NH 03823

Telephone: 603-749-9797 Fax: 603-743-4540

Stratham Hill Stone

313 Portsmouth Ave (RTE. 33). Stratham, NH 03885 Telephone: (603) 431-0088

GravityStone® Fat Face & Fat Face 2/3 Scored



Fat Face





Fat Face - 2/3 Scored

Part of the GravityStone family of wall systems, Fat Face and Fat Face 2/3 Scored provide a strong, durable, and attractive retaining wall solution for a variety of site conditions. Fat Face is our original split face unit. Fat Face 2/3 Scored is a three-piece set. Two units have a chamfered score located 2/3 along the length of the split face; the third unit an unscored split face. All three have well-defined chamfers molded into each end providing a distinctive sculptured appearance.

Both styles are one square foot blocks. The open-core design optimizes interlock from one course to the next with a "rock-to-rock" connection. For additional design flexibility, both Fat Face and Fat Face 2/3 Scored can be integrated together and used in combination with the GravityStone Modular System.

Applications







Commercial / Municipal Retaining Walls

Composition & Performance

Fat Face and Fat Face 2/3 Scored are produced under controlled factory conditions, molded from a cement-rich mixture blended with select aggregates and pure iron oxide pigments formed under extreme pressure and vibration. Both style can create straight, concave, or convex retaining walls in either a vertical or battered configuration using a unique reversible alignment plug. When used with geogrid, walls as tall as 20' and higher can be constructed.

Physical Characteristics

Ideal's wall products meet or exceed North American industry standards, including ASTM C1372 Standard Specification for Drycast Segmental Retaining Wall Units. Strict quality control ensures consistent strength and durability.



Granite Gray Fat Face & 2/3 Scored



Vineyard Blend Fat Face & 2/3 Scored



Quarry Blend Fat Face

Fat Face - 2/3 Scored

Fat Face: Single standard unit

Face Face - 2/3 Scored: 2 scored units, 1 standard unit

18" I x 8" h x 11.25" d **Dimensions:**

Weight: 75 lbs Face Area: 1 sf/unit

Corner Unit: 15"l x 8" h x 6" d **Compressive Strength:** 4500 psi minimum

7% maximum Water Absorption:

Dimensional Tolerance: ± 1/8"

Wall Batter: Vertical to 4.5° (3/4" per foot)

GravityStone® Fat Face & Fat Face 2/3 Scored

Design Considerations

Ideal provides general information on design and construction. In all cases, the user should exercise diligence in determining its suitability for the side. Walls 4' and higher, terraced walls, and sites with weak soils, slopes and surcharges require special consideration and construction techniques, including the use of geogrid. These conditions require the services of a qualified soils engineer and a professional contractor familiar with wall construction. Always comply with local building codes.

Fat Face Installation

Leveling Pad

Prepare a foundation by excavating and filling with a minimum of 6" of crushed stone, ensure it is level and compacted.



Begin the first course by starting at the lowest elevation. After placing a string line, position each Face block along the line, level side to side and front to back, using a rubber mallet to seat the block. Place perforated pipe behind.

Placing Plugs

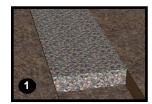
After completing each course, place a Reversible Alignment Plug into each of the two plug cores cast into the top of each block. Placing the Plug in the forward position will create a vertical wall, reversing the plug will create a 1/12 {4.5 degree} batter.

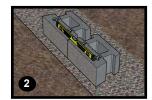
Backfill/Compaction

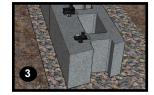
After reaching a maximum of three courses, backfill the GravityStone units with the specified aggregate, filling the core of the face units and an additional 12" behind. Compact the soil with a vibratory compactor to the proper density. Sweep debris from the top of the blocks before starting the next block course.

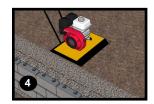
Placing Geogrid

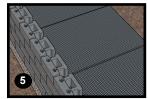
Following the engineer's design, place the Geogrid at the proper course and to the specified length. Make sure that the Geotextile is in full contact with the soil.







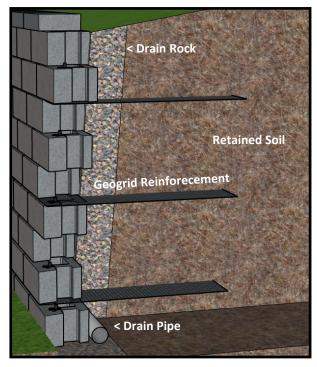




Capping the Wall

Once the body of the wall is complete, permanently affix a Cap Block to the Face Block using an approved concrete adhesive parallel to the wall face on both sides of the plug holes. Place the Cap Block onto the adhesive, making sure of its proper position.





Always wear proper safety equipment when cutting or sawing concrete products.

A white deposit known as efflorescence may appear naturally on any concrete or masonry product. It does not affect the structural integrity and will dissipate over time. Efflorescence is not indicative of a flawed product. For more information, ask for our Efflorescence Advisory

Technical Information & Services

We recommend WSB Design software, Ideal's Contractor's Guide to Installing SRWs, and NCMA's SRWs Best Practice Guide as resources for design and technical information. We provide design consultation, including free Preliminary Engineering Design Service, specification assistance and job-site quality review.



Westford & Waltham, MA 781.894.3200 • info@ldealConcreteBlock.com www.ldealConcreteBlock.com

Fat Face Core and GravityStone are a licensed product of WestBlock Systems, Inc. GravityStone and WestBlock Systems are registered trademarks of WestBlock Systems, Inc. U.S. Patent Nos. 5,350, 256, 5,688, 078, D468,450, D475,143 and patents pending WESTBLOCK SYSTEMS®





Appendix E – AWR Waiver Request



Amesbury

CONSERVATION COMMISSION

Tel: (978) 388-8110 Fax: (978) 388-6727

Applicant signature

62 Friend Street Second Floor Amesbury, MA 01913

Amesbury Conservation Commission Waiver Request Form

All projects submitted for review to the Amesbury Conservation Commission should comply with the Amesbury Wetlands Ordinance and its implementing regulations as well as the Massachusetts Wetlands Act and its implementing regulations (310 CMR § 10.00). If you cannot comply with any portion of the Amesbury Wetlands Regulations you should file this waiver request identifying any areas where your proposed project is not in full compliance.

Project: 54 L	Lake Attitash Road	
Applicant: _	Robert Manseau	
Applicant's A	Address: 54 Lake Attitash Road, Amesbury, MA 01913	
		
Contact Infor	rmation: Telephone:978.807.9651	
Email:	bobmanseau@comcast.net	
I hereby reque lowing section	nest a waiver pursuant to the Amesbury Wetlands Regulations § 7.13 from the folon(s)	
AWR 21.3 - La		
AWR 21.4 - Pie	iers	
sheet if neces	• /	
21.3 - Pervious p	pavers to allow infiltration of rainwater while stabilizing soils in area of heavy foot traffic at top of slope.	Luminum
21.4 - Pier for ex	existing, lawfully located dock structure in Lake Attitash	fence
Rol	berk Tuansean 9-25-21	
Applicant signat	Date	

10

The Commonwealth of Massachusetts

No.

6802



Bherens.

John & Sandra Paulson

of -- Amesbury --, in the County of -- Essex -- and Commonwealth aforesaid, has applied to the Department of Environmental Protection for license to -- maintain existing docks and existing retaining wall ----

NOW, said Department, having heard all parties desiring to be heard, and having fully considered said application, hereby, subject to the approval of the Governor, authorizes and licenses the said

-- John & Sandra Paulson --, subject to the provisions of the ninety-first chapter of the General Laws, and of all laws which are or may be in force applicable thereto, to -- maintain existing docks and existing retaining wall -----

in and over the waters of -- Lake Attitash -- in the -- Town -- of -- Amesbury -- and in accordance with the locations shown and details indicated on the accompanying DEP License Plan No. 6802, (2 sheets).

JOHN PAULSON
54 LAKE ATTITASH ROAD
AMESBURY MA 01913

PRINTED ON RECYCLED PAPER

License No. 6802

Page 2

The structures hereby authorized shall be limited to the following uses: to provide noncommercial docking and boating access to navigable waters and shoreline stabilization for the protection of existing structures.

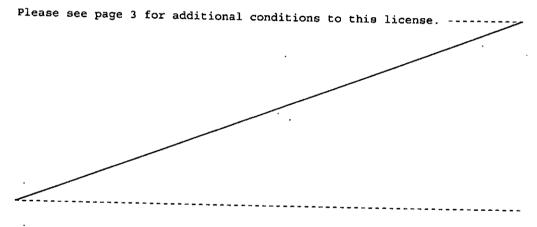
SPECIAL WATERWAYS LICENSE CONDITIONS

In accordance with any license condition, easement, or public right of lateral passage that exists in the area of the subject property lying below the ordinary high water mark, the Licensee shall allow the public in the exercise of such rights to pass freely over all structures within such area.

Accordingly, the licensee shall place and maintain, in good repair, a public access sign on each side of the docks authorized herein, adjacent to the ordinary highwater shoreline. Said signs, provided by the Department, shall be posted immediately upon receipt. Nothing in this condition shall be construed as preventing the licensee from excluding the public from portions of said structures not intended for lateral access.

The project authorized herein has been completed in conformance with the accompanying License Plan. The issuance of this License, therefore, fulfills the Licensee's obligation to obtain a Certificate of Compliance pursuant to 310 CMR 9.19.

This license will expire ninety-nine (99) years from the date of issuance.



Duplicate of said plan, number 6802 is on file in the office of said Department, and original of said plan accompanies this License, and is to be referred to as a part hereof.

STANDARD WATERWAYS LICENSE CONDITIONS

- 1. Acceptance of this Waterways License shall constitute an agreement by the Licensee to conform with all terms and conditions stated herein.
- 2. This License is granted upon the express condition that any and all other applicable authorizations necessitated due to the provisions hereof shall be secured by the Licensee prior to the commencement of any activity or use authorized pursuant to this License.
- 3. Any change in use or any substantial structural alteration of any structure or fill authorized herein shall require the issuance by the Department of a new Waterways License in accordance with the provisions and procedures established in Chapter 91 of the Massachusetts General Laws. Any unauthorized substantial change in use or unauthorized substantial structural alteration of any structure or fill authorized herein shall render this Waterways License void.
- 4. This Waterways License shall be revocable by the Department for noncompliance with the terms and conditions set forth herein. This license may be revoked after the Department has given written notice of the alleged noncompliance to the Licensee and those persons who have filed a written request for such notice with the Department and afforded them a reasonable opportunity to correct said noncompliance. Failure to correct said noncompliance after the issuance of a written notice by the Department shall render this Waterways License void and the Commonwealth may proceed to remove or cause removal of any structure or fill authorized herein at the expense of the Licensee, its successors and assigns as an unauthorized and unlawful structure and/or fill.
- 5. The structures and/or fill authorized herein shall be maintained in good repair and in accordance with the terms and conditions stated herein and the details indicated on the accompanying license plans.
- 6. Nothing in this Waterways License shall be construed as authorizing encroachment in, on or over property not owned or controlled by the Licensee, except with the written consent of the owner or owners thereof.
- 7. This Waterways License is granted subject to all applicable Federal, State, County, and Municipal laws, ordinances and regulations including but not limited to a valid final Order of Conditions issued pursuant to the Wetlands Protection Act, G.L. Chapter 131, s.40.
- 8. This Waterways License is granted upon the express condition that the use of the structures and/or fill authorized hereby shall be in strict conformance with all control.
- 9. This License authorizes structure(s) and/or fill on:
 - Private Tidelands. In accordance with the public easement that exists by law on private tidelands, the licensee shall allow the public to use and to pass freely upon the area of the subject property lying between the high and low water marks, for the purposes of fishing, fowling, navigation, and the natural derivatives thereof.
 - Commonwealth Tidelands. The Licensee shall not restrict the public's right to use and to pass freely, for any lawful purpose, upon lands lying seaward of the low water mark. Said lands are held in trust by the Commonwealth for the benefit of the public.
 - x a Great Pond of the Commonwealth. The Licensee shall not restrict the public's right to use and to pass freely upon lands lying seaward of the high water mark for any lawful purpose.

No restriction on the exercise of these public rights shall be imposed unless otherwise expressly provided in this license.

10. Unless otherwise expressly provided by this license, the licensee shall not limit the hours of availability of any areas of the subject property designated for public passage, nor place any gates, fences, or other structures on such areas in a manner that would impede or discourage the free flow of pedestrian movement thereon.

License No. 6802

Page 4

The amount of tidewater displaced by the work hereby authorized has been ascertained by said Department, and compensation thereof has been made by the said -- -- by paying into the treasury of the Commonwealth -- two dollars and zero cents (\$2.00) -- for each cubic yard so displaced, being the amount hereby assessed by said Department (0.0 ou. yds. - \$0.00).

Nothing in this License shall be so construed as to impair the legal rights of any person. This License shall be void unless the same and the accompanying plan are recorded within 60 days from the date hereof, in the Registry of Deeds for the County of -- Essex -----

IN WITNESS WHEREAS, said Department of Environmental Protection have hereunto set their hands this twelfth day of September in the year nineteen hundred and ninety-seven.

Commissioner

Section Chief

Department of Environmental Protection

THE COMMONWEALTH OF MASSACHUSETTS

This license is approved in consideration of the payment into the treasury of the Commonwealth by the said -- John & Sandra Paulson --

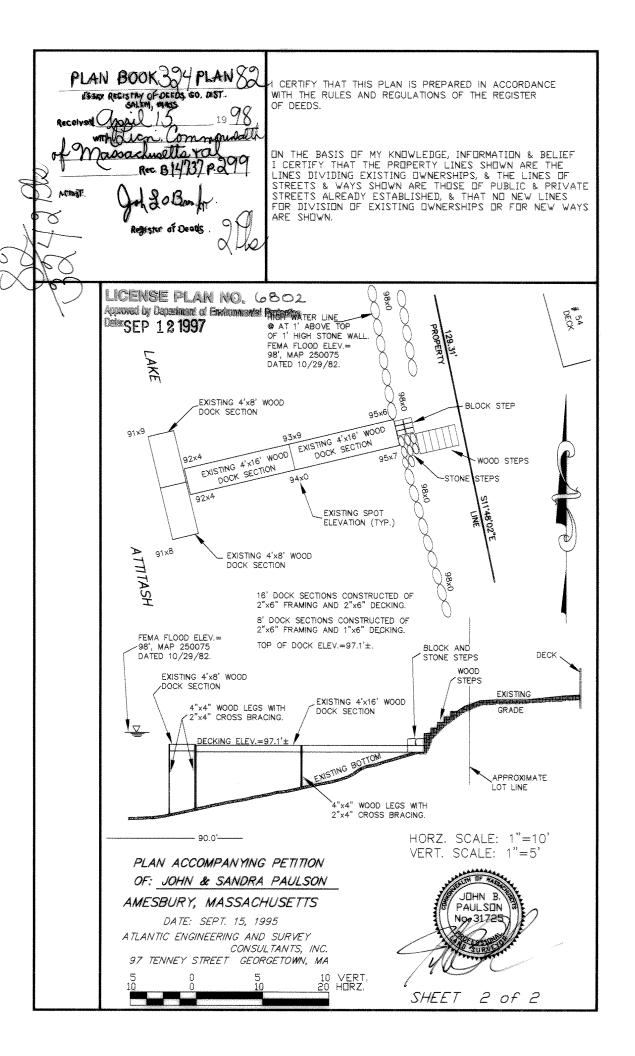
the further sum of -- zero dollars and zero cents (\$0.00)

the amount determined by the Governor as a just and equitable charge for rights and privileges hereby granted in the land of the Commonwealth.

BOSTON

Approved by the Governor.

Ber Paul Cell,
Acting Governor





Appendix F – Original NOI Application



Atlantic Engineering & Survey Consultants, Inc.

97 Tenney Street Georgetown, MA 01833

978-352-7870 • 978-352-9940 (fax) atlantic84@gmail.com

John B. Paulson, P.L.S. President

April 13, 2021

City of Amesbury Conservation Commission 62 Friend Street Amesbury, MA 01913

Re: Notice of Intent for Manseau Family Revocable Trust

Site: 54 Lake Attitash Road Assessor's Map 59, Parcel 22

Dear Commission Members;

As required by the Wetlands Protection Act and the Town of Amesbury Bylaws we hereby submit the attached Notice of Intent Application for work to be performed at the above referenced site.

Included in this submission are the following documents:

- The Application with associated forms and documents. Included in this information:
 - A copy of the Wetland Fee Transmittal Form.
 - Area Locus Map showing the site area.
 - Other assorted documents and maps.
- A Permit Plan by Atlantic Engineering dated April 9, 2021
- Checks as required under the Wetland Protection Act and under the Local Bylaw.

This plan is for improvements to the rear yard area of an existing single family home. They include the construction of a retaining wall, a pervious paver patio and walkways, the removal of 3 trees, the replacement of existing wood steps to the dock with proposed granite steps and cleaning and enhancements along the shoreline including the removal of invasive species and the planting of buffer zone friendly plants and shrubs.

The certified abutters list is also included.

It is our understanding that the legal advertisement for the required hearings will be placed in the local paper by the Owners. It is our wish to be scheduled for a hearing at your earliest scheduled meeting time. Please feel free to call me should you need any additional information.

Sincerely

John B. Paulson, President

enclosures



WPA Form 3 - Notice of Intent

A. General Information

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

AMESBURY

g. Zip Code

City/Town

Important:

When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.





Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

54 Lake Attitash Road	AMESBURY	01913
a. Street Address	b. City/Town	c. Zip Code
Latitude and Longitude:	42.851107	-70.973669
Latitude and Longitude.	d. Latitude	e. Longitude
59	22	
f. Assessors Map/Plat Number	g. Parcel /Lot Number	
Applicant:		
Robert	Manseau	
a. First Name	b. Last Name	
Manseau Family Revocable Trust		
c. Organization		
54 Lake Attitash Road		
d. Street Address		
AMESBURY	MA	01913
e. City/Town	f. State	g. Zip Code
978-807-9651	robertmanseau@com	cast.net
h. Phone Number i. Fax Number	j. Email Address	
Property owner (required if different from	applicant):	more than one owner
SAME		
a. First Name	b. Last Name	

4. Representative (if any):

d. Street Address

h. Phone Number

e. City/Town

John		Paulson	
a. First Name		b. Last Name	
Atlantic Engineerin	g & Survey Consultants,	Inc.	
c. Company	•		
97 Tenney Street			
d. Street Address			
Georgetown		MA	01833
e. City/Town		f. State	g. Zip Code
978-352-7870	978-352-9940	atlantic84@gmail.co	om
h. Phone Number	i. Fax Number	j. Email address	

f. State

j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

i. Fax Number

110.00 +110.00 Bylaw	42.50	67.50 + 110.000 bylaw
a. Total Fee Paid	b. State Fee Paid	c. City/Town Fee Paid



WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

AMESBURY City/Town

A. General Information (continued)

	(
6. General Project Description:					
	walkways, the removal of 3 trees, construction of replace	Improvements in the yard of a single family home including a retaining wall, a pervious patio and walkways, the removal of 3 trees, construction of replacements steps to the dock and landscape enhancements along the shoreline including removal of invasive species the the planting of buffer zone friendly plants and shrubs.			
7a.	7a. Project Type Checklist: (Limited Project Types see Secti	on A. 7b.)			
	1. Single Family Home 2.	Residential Subdivision			
	3. Commercial/Industrial 4.	☐ Dock/Pier			
	5. Utilities 6.	Coastal engineering Structure			
	7. Agriculture (e.g., cranberries, forestry) 8.	☐ Transportation			
	9. Dother				
7b.					
	2. Limited Project Type				
	If the proposed activity is eligible to be treated as an Eco CMR10.24(8), 310 CMR 10.53(4)), complete and attach Project Checklist and Signed Certification.				
8.	8. Property recorded at the Registry of Deeds for:				
	Essex South				
	a. County b. Ce	ertificate # (if registered land)			
	37756 105	The Month of			
_		ge Number			
В.	B. Buffer Zone & Resource Area Impacts	(temporary & permanent)			
1.	☐ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering				
2.	Vegetated Wetland, Inland Bank, or Coastal Resource Inland Resource Areas (see 310 CMR 10.54-10.58; i Coastal Resource Areas).				
		Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including			

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standards requiring consideration of alternative project design or location.



WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

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X287694

Document Transaction Number

AMESBURY

City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Resource Area Size of Proposed Alteration Proposed Replacement (if any) 0 a. 🖂 Bank 1. linear feet 2. linear feet b. 🗌 **Bordering Vegetated** 0 Wetland 1. square feet 2. square feet 0 c. 🔲 Land Under 1. square feet 2. square feet Waterbodies and Waterways 3. cubic yards dredged Proposed Replacement (if any) Resource Area Size of Proposed Alteration **Bordering Land** d. 🗌 1. square feet 2. square feet Subject to Flooding 3. cubic feet of flood storage lost 4. cubic feet replaced е. П Isolated Land 1. square feet Subject to Flooding 2. cubic feet of flood storage lost 3. cubic feet replaced f. \square Riverfront Area 1. Name of Waterway (if available) - specify coastal or inland Width of Riverfront Area (check one): 25 ft. - Designated Densely Developed Areas only 100 ft. - New agricultural projects only 200 ft. - All other projects 3. Total area of Riverfront Area on the site of the proposed project: square feet 4. Proposed alteration of the Riverfront Area: a. total square feet b. square feet within 100 ft. c. square feet between 100 ft. and 200 ft. 5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☒ No 6. Was the lot where the activity is proposed created prior to August 1, 1996? 3. Coastal Resource Areas: (See 310 CMR 10.25-10.35)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Note: for coastal riverfront areas, please complete Section B.2.f. above.



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

rov	ided by MassDEP:
	MassDEP File Number
	X287694
	Document Transaction Number
	AMESBURY
	City/Town

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users:
Include your
document
transaction
number
(provided on you
receipt page)
with all
supplementary
information you
submit to the
Department.

4.

5.

Resou	rce Area	Size of Proposed A	<u>Alteration</u>	Proposed Replacement (if any)
a. 🗌	Designated Port Areas	Indicate size und	er Land Unde	r the Ocean, below
b. 🗌	Land Under the Ocean	square feet cubic yards dredged		
с. 🗌	Barrier Beach			ches and/or Coastal Dunes below
d. 🔲	Coastal Beaches	1. square feet		2. cubic yards beach nourishment
e. 🗌	Coastal Dunes	1. square feet		2. cubic yards dune nourishment
		Size of Proposed A	<u>Alteration</u>	Proposed Replacement (if any)
f	Coastal Banks	1. linear feet		
g. 🔲	Rocky Intertidal Shores	1. square feet		
h. 🗌	Salt Marshes	1. square feet		2. sq ft restoration, rehab., creation
i. 🗌	Land Under Salt Ponds	1. square feet		
		2. cubic yards dredged		
j. 🗌	Land Containing Shellfish	1. square feet		
k. 🗌	Fish Runs			ks, inland Bank, Land Under the er Waterbodies and Waterways,
		1. cubic yards dredged		
I. 🗌	Land Subject to Coastal Storm Flowage	1. square feet		
Restoration/Enhancement If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.				
a. square feet of BVW		k	o. square feet of S	Salt Marsh
☐ Project Involves Stream Crossings				
a. numb	er of new stream crossings		o. number of repla	acement stream crossings



WPA Form 3 - Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

1	Provided by MassDEP:			
	MassDEP File Number			
	X287694			
	Document Transaction Number			
	AMESBURY			

City/Town

C. Other Applicable Standards and Requirements
--

	This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).		
Str	reamlined Massachusetts Endangered Spec	ies Act/Wetlands Protection Act Review	
1.	Is any portion of the proposed project located in Estimated Habitat of Rare Wildlife as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the <i>Massachusetts Natural Heritage Atlas</i> or go to http://maps.massgis.state.ma.us/PRI EST HAB/viewer.htm.		
	a. Yes No If yes, include proof of n	nailing or hand delivery of NOI to:	
	on line b. Date of map Natural Heritage and E Division of Fisheries a 1 Rabbit Hill Road Westborough, MA 015		
	If yes, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); OR complete Section C.2.f, if applicable. If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).		
	c. Submit Supplemental Information for Endangere	ed Species Review*	
	1. Percentage/acreage of property to be	altered:	
	(a) within wetland Resource Area	percentage/acreage	
	(b) outside Resource Area	percentage/acreage	
	2. Assessor's Map or right-of-way plan of	fsite	
2.	Project plans for entire project site, including wetlands jurisdiction, showing existing and propos tree/vegetation clearing line, and clearly demarcate	ed conditions, existing and proposed	
	(a) Project description (including description buffer zone)	on of impacts outside of wetland resource area &	
	(b) Photographs representative of the site		

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^{*} Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process. Page 5 of 9



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Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

1	Provided by MassDEP:
	MassDEP File Number
	X287694
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	AMESBURY

C. Other Applicable Standards and Requirements (cont'd)

(c) MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and <i>mail to NHESP</i> at above address												
	Projects	s altering 10 or more acres of land, also subr	mit:									
	(d)	Vegetation cover type map of site										
	(e)	Project plans showing Priority & Estima	ted Habitat boundaries									
	(f) OF	R Check One of the Following										
	1. 🗌	Project is exempt from MESA review. Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm ; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)										
	2. 🗌	Separate MESA review ongoing.	a. NHESP Tracking #	b. Date submitted to NHESP								
	3. 🗌	Separate MESA review completed. Include copy of NHESP "no Take" deter Permit with approved plan.	rmination or valid Conser	vation & Management								
3.	For coasta line or in a	I projects only, is any portion of the propo fish run?	osed project located belo	w the mean high water								
	a. Not a	applicable – project is in inland resource a	area only b. 🗌 Yes	⊠ No								
	If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:											
	South Shore - Cohasset to Rhode Island border, and the Cape & Islands: North Shore - Hull to New Hampshire border:											
	Southeast M Attn: Environ 1213 Purcha New Bedford	Marine Fisheries - Marine Fisheries Station nmental Reviewer ase Street – 3rd Floor d, MA 02740-6694 F.EnvReview-South@state.ma.us	Division of Marine Fisheries - North Shore Office Attn: Environmental Reviewer 30 Emerson Avenue Gloucester, MA 01930 Email: DMF.EnvReview-North@state.ma.us									

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.



Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Massachusetts Department of Environmental ProtectionBureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number X287694

Document Transaction Number

AMESBURY

City/Town

C. Other Applicable Standards and Requirements (cont'd)

4.	Is any _l	oortion o	of the pr	oposed project within an Area of Critical Environmental Concern (ACEC)?
	а. 🗌 Ү	′es 🛚	No	If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEI Website for ACEC locations). Note: electronic filers click on Website.
	b. ACEC			
5.	Is any _I	oortion o		oposed project within an area designated as an Outstanding Resource Water in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?
	a. 🛛 Y	′es 🗌	No	
6.				te subject to a Wetlands Restriction Order under the Inland Wetlands c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105
	a. 🗌 Y	′es 🛚	No	
7.	Is this p	oroject s	subject to	o provisions of the MassDEP Stormwater Management Standards?
	а. 🗌			copy of the Stormwater Report as required by the Stormwater Management
	1. [plying fo	per 310 CMR 10.05(6)(k)-(q) and check if: or Low Impact Development (LID) site design credits (as described in water Management Handbook Vol. 2, Chapter 3)
	2. [] A	oortion o	of the site constitutes redevelopment
	3. [] Pro	oprietary	y BMPs are included in the Stormwater Management System.
	b. 🔀	No. Ch	eck wh	y the project is exempt:
	1.	⊠ Sir	ngle-fam	nily house
	2. [] En	nergenc	y road repair
	3. [or			idential Subdivision (less than or equal to 4 single-family houses or less than units in multi-family housing project) with no discharge to Critical Areas.
D.	Add	itiona	ıl Info	ormation
		dix A: E		an Ecological Restoration Limited Project. Skip Section D and complete Il Restoration Notice of Intent – Minimum Required Documents (310 CMR
	Applica	ints mus	st includ	e the following with this Notice of Intent (NOI). See instructions for details.
				the document transaction number (provided on your receipt page) for any of on you submit to the Department.
	1.	sufficie	nt inforr	r map of the area (along with a narrative description, if necessary) containing mation for the Conservation Commission and the Department to locate the sit rs may omit this item.)
	2. 🗌	a Bord	ering Ve	ng the location of proposed activities (including activities proposed to serve as egetated Wetland [BVW] replication area or other mitigating measure) relative ries of each affected resource area.



WPA Form 3 – Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

1	Provided by MassDEP:
	MassDEP File Number
	X287694
	Document Transaction Number
	AMESBURY

City/Town

D. Additional Information (cont

υ.	Auu	itional information (contd)											
	3.		resource area boundary delineations (MassDEP BVW applicability, Order of Resource Area Delineation, etc.), ethodology.										
	4. 🔀	List the titles and dates for all plans an	d other materials submitted with this NOI.										
	Conservation Permit Plan at 54 Lake Attitash Road in Amesbury, MA												
	a. F	Plan Title											
	Atl	antic Engineering	John Paulson PLS31725										
	b. F	Prepared By	c. Signed and Stamped by										
	Ap	ril 9, 2021	1=10										
	d. F	Final Revision Date	e. Scale										
	f. A	dditional Plan or Document Title	g. Date										
	5.	If there is more than one property own listed on this form.	er, please attach a list of these property owners not										
	6.	Attach proof of mailing for Natural Heritage and Endangered Species Program, if neede											
	7.	Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.											
	8. Attach NOI Wetland Fee Transmittal Form												
	9. Attach Stormwater Report, if needed.												
Ε.	Fees	i											
	1.	1. Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.											
		ints must submit the following information (in addition to pages 1 and 2 of the NOI Wetland ansmittal Form) to confirm fee payment:											
	2154	, , , , , , , , , , , , , , , , , , , ,	4/13/2021										
		ipal Check Number	3. Check date										
	2155		4/13/2021										
		Check Number	5. Check date										
	Robert		Manseau										
		name on check: First Name	7. Payor name on check: Last Name										

wpaform3.doc • rev. 6/28/2016 Page 8 of 9



WPA Form 3 - Notice of Intent
Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

X287694

Document Transaction Number

AMESBURY

City/Town

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

Bobert manseau	4/12/2021	
1. Signature of Applicant	2. Date	
3. Signature of Property Owner (if different)	4. Date	
	4/12/2021	
5. Signature of Representative (if any)	6. Date	

For Conservation Commission:

Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For WasenEP

One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a copy of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:

If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

A. Applicant Information

NOI Wetland Fee Transmittal Form

X284346

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key





. Location of Proje	ct:								
54 Lake Attitash	Road	Amesbury							
 a. Street Address 		b. City/Town							
		42.50							
c. Check number		d. Fee amount							
. Applicant Mailing	Address:								
Robert		Manseau							
a. First Name		b. Last Name							
Manseau Family	Revocable Trust								
c. Organization									
54 Lake Attitash	Road								
d. Mailing Address									
Amesbury		MA	01913						
e. City/Town		f. State	g. Zip Code						
978-807-9651		robertmanseau@comcast	.net						
h. Phone Number	i. Fax Number	j. Email Address							
. Property Owner (if different):								
Same									
a. First Name		b. Last Name							
c. Organization									
d. Mailing Address									
e. City/Town		f. State	g. Zip Code						
h. Phone Number	i. Fax Number	j. Email Address							

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. *Please see Instructions before filling out worksheet.*

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract \$12.50. To calculate the city/town share of the fee, divide the total fee in half and add \$12.50.



Massachusetts Department of Environmental Protection

Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

X284346

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)			
Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
1a work at a single family home	1	1	110.00
	Step 5/T	otal Project Fee:	110.00
	Step 6	Fee Payments:	
	Total	Project Fee:	110.00 a. Total Fee from Step 5
	State share	42.50 b. 1/2 Total Fee less \$ 12.50	
	City/Town share	e of filling Fee:	67.50 c. 1/2 Total Fee plus \$12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection Box 4062 Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)



Atlantic Engineering & Survey Consultants, Inc. 97 Tenney Street Georgetown, MA 01833

978-352-7870 • 978-352-9940 (fax) atlantic84@gmail.com

John B. Paulson, P.L.S. President George J. Zambouras, P.E.

April 9, 2021

City of Amesbury Conservation Commission 62 Friend Street Amesbury, MA 01913

Re: Notice of Intent for Robert Manseau

Site: 54 Lake Attitash Road Assessor's Map 59, Parcel 22

PROJECT NARRATIVE

Introduction

The home at 54 Lake Attitash Road was originally built around 1900 according to the City of Amesbury Assessor's information. It was originally built as a seasonal cottage and later became a year around home. In the mid 1980's the home underwent significant renovations that include the installation of a full foundation, and expansion in the living area and the addition of a 2 car garage. In the mid 1990's the garage was converted into an in-law apartment. The property remained in this configuration until it was sold in August 2019. The new owners embarked on a major renovation of the dwelling in 2019. An Order of Conditions was issued for some work that was proposed in the yard and the exterior of the house. This was completed and a Certificate of Compliance was issued in February 2021 and recorded in the registry of deeds in book 39656 page 230.

Also as part of this property is a dock which was licensed in 1997 with a transferable license which is valid for 99 years.

The property is 10,450 square feet in area. The Lot was created by a plan recorded in 1946 and recorded in plan book 75 as Lot 8 on plan 52.

Proposed Work

This project proposes several improvements to the site. All of the improvements are to take place on the southerly and westerly sides of the lot.

There are 4 main features that are being proposed. The first is the construction of a segmented retaining wall along the top of the slope. The second is the construction of a pervious paver patio and walkways. The third is the replacement of a set of wooden steps leading down to the existing docks with granite

steps. The last is the cleanup and enhancement of the lower slope area along the entire lake frontage. Each of these features is described in the following narrative.

Feature #1

A new retaining wall is proposed approximately 15 feet behind the house and along the top of the existing slope. The wall will be constructed of segmented blocks and the maximum height will be 4 feet. A fence will be installed in the wall for safety. The top of the wall will be at elevation 102.5 for a majority of the length. The bottom of the wall will be at the approximate existing elevation of 99 feet. A typical section of the wall is shown on the plan. A brochure of the wall is included in the application. The wall will be located between 11 and 18 feet from the edge of the lake. The wall installation will result in the removal of 1 tree. It is impossible to keep this tree as it is on the slope and has had some filling already done around it. In addition the root system is likely to be in the way of the wall. There was a twin to this tree which had to be removed a number of years ago. I believe this tree is also near it's end of life.

Feature #2

A new pervious paver patio is proposed off the most southerly corner of the house. It is proposed at 21 feet by 22 feet. Pervious walkways are also proposed as shown. A section showing the construction and a picture of a typical layout are shown on the plan. A brochure of the pavers is included in the application. In order to install the paver patio level area is required. This will necessitate the cutting of 2 pine trees. This is the only location on the property that is suitable for this patio.

Feature #3

A set of wooden steps was built to access the dock in 2019. Wood steps are always in need of upkeep, repair and replacement. The current plan is to replace the wood steps with granite steps. The granite blocks will be 4 feet wide. The steps will start at the proposed wall and will go down to elevation 96 feet. Each step will be about 8" high. The steps will be built into the existing slope.

Feature #4

The shoreline area from the base of the proposed segmented wall to the stone wall at the edge of the water is in a degraded state. It has a large area of Japanese Knotweed along the northerly portion of the waterfront. The rest of the slope contains poison ivy and other overgrown undergrowth. Due to the nature of the property the slope is hard to access and maintain. We are proposing to work on this slope in 3 sections.

Section 1 – The northerly shoreline behind the garage contains a large area of knotweed. It is about 350 square feet. The plan is to completely remove the soil in this area in order to uncover and remove the main root(s) of the knotweed. As part of this it will be necessary to remove and stack the stone wall along the shoreline. This is because the roots of the knotweed are tangled through the wall. All of the contaminated material will be carefully removed from the site. New screened loam will be trucked in to replace the material removed. The grading on the slope will remain the same. The stone wall along the shore line will be reset when all the work is complete.

Section 2 – The next section of the shoreline is the area from the maple cluster to the stairs. This area needs to be cleaned up, weeded, the existing slope graded evenly and replanted with buffer zone friendly plants. The existing landscape timbers near the steps will also be removed. The rock wall along the water has been disturbed and pushed around by the lake ice. The wall will be repositioned and re-enforced to the average existing height of 1 to 2 rocks high.

Section 3 – The final sections of the shoreline to be worked on is the area to the right of the steps over to the southerly property line. This area is very overgrown. There are the remains of one willow tree that needs to be removed. The rock wall along the water has been disturbed and pushed around by the lake ice. Portions of the wall have been covered by dirt. The wall will be repositioned and re-enforced to the average existing height of 1 to 2 rocks high.

Other Considerations

- 1. Three trees which are in the upper yard are to be removed as part of this project. In addition 3 existing stumps need to be dealt. It is proposed that the trees be cut and then a total of 5 stumps will be ground to grade. The 6th stump which is in the proposed wall will be ground or removed as necessary to build the wall.
- 2. A variety of plants and ground cover will be used on the lower slope to enhance the area with buffer zone friendly plants. A list of plant, shrub and ground cover options are included in this application. There may be other plants used with the approval of the commission. The listed plants are taken from the Massachusetts Buffer Manual.
- 3. In the yard area around the patio 6 shrubs will be planted which are buffer zone friendly and are also taken from the Massachusetts Buffer Manual.
- 4. A siltation barrier is shown on the plan. Because of the type of work that is being proposed there is no ideal location for the barrier. It is proposed to be along the lower rock wall on the plan. During the segmented wall construction it is likely that the barrier will be located up slope such that it is on 2 to 3 feet off of the wall.
- 5. The anticipation is that all of the work done by a small excavator will be done from the top of the slope. There is no plan that any equipment will work from the water side of the project. Any work on the lower slope area will be done by hand.

Respectfully,

John Paulson, P.L.S.

Wetlands & Land Management, Inc.

100 Conifer Hill Drive - #516 Danvers, MA 01923 978-777-0004 Telephone

August 26, 2019

Bob Manseau 20 Lake Attitash Road Amesbury, MA 01913

RE: Wetland Resource Evaluation at 54 Lake Attitash Road, Amesbury, MA

Dear Mr. Manseau:

Wetlands & Land Management, Inc. has completed our evaluation of wetland resource areas at your new property at 54 Lake Attitash Road in Amesbury. We performed this evaluation on August 26, 2019.

The property is developed with a residential home with deck and porch on the water side, a bituminous drive on the street side and casual and recently overgrown landscaping around the site. The land directly abuts Lake Attitash.

The house, deck and porch are located several feet higher than the adjacent lake. I noted a narrow, level area between the deck or porch and a sloped embankment down to the water edge. I noted there were remnants of landscape tie constructed planting beds on the slope in some locations, wood steps to the water and the water edge was armored with riprap across the entire site. The two abutting properties had concrete retaining walls along there respective waterfronts.

There were no vegetated wetlands along the lake embankment owing to the steep to moderate slope along the waterfront. Wetland resource areas along the pond edge included bank resource area and land under water.

I marked the upper limit of bank resource are with blue surveyors flagging labeled Bank 1 to Bank 7. Bank 1 is located on the left or southerly property line adjacent to the neighbors concrete shoreline wall. The flag line trends along a generally distinct, near vertical drop off of roughly 12 inches along the water line. Bank 7 is the last flag and ends at the northerly property line at those neighbors concrete steps and wall.

The lower limit of bank would be the bottom of the bank drop off or the natural mean low water line of the lake. The area outward from the bank would be land under water resource area.

The bank resource area is the most landward resource area. A 100-foot buffer zone extends from the bank flags. It appears that the entire property is in that jurisdictional buffer zone.

You informed me that the site landscaping had been neglected for the past year or so. I noted an infestation Japanese knotweed growing along the lake embankment. If left unchecked, this weed will continue to grow and spread, possibly exporting seeds to float away and establish on other properties. Control of this noxious weed is advisable.

The two main methods for eradication are to dig and remove the entire plant and root mass, or apply an herbicide to the plant. Either method requires repeated spot treatment by additional herbicide treatment or digging out re-emerging stems as they appear.

Rare Species and Certified Vernal Pools

The MassGIS data layer for the Natural Heritage Program indicates your property is not mapped as estimated habitat of rare wetlands wildlife, or Priority Habitat of threatened or endangered species.

I trust this information will be useful to you. Be advised, the Conservation Commission is the authority that will make a final determination of the limits of resource areas.

Sincerely,

Wetlands & Land Management, Inc.

William Manuell

William J. Manuell Wetland Scientist

PAVERS BY IDEAL







GravityStone® Fat Face & Fat Face-2/3 Scored





GravityStone® Fat Face & Fat Face - 2/3 Scored

INTRODUCTION

Part of the GravityStone family of wall systems, Fat Face and Fat Face - 2/3 Scored provide a strong, durable, and attractive retaining wall solution for a variety of site conditions. Fat Face is our original split face unit. Fat Face - 2/3 Scored is a three-piece set. Two units have a chamfered score located 2/3 along the length of the split face; the third unit an unscored split face. All three have well-defined chamfers molded into each end providing a distinctive sculptured appearance.

Both styles are one square foot blocks ideally suited for commercial, municipal and residential walls. The open-core design optimizes interlock from one course to the next with a "rock-to-rock" connection. For additional design flexibility, both Fat Face and Fat Face - 2/3 Scored can be integrated together and used in combination with the GravityStone Modular System.

COMPOSITION & PERFORMANCE

Fat Face and Fat Face - 2/3 Scored are produced under controlled factory conditions. Molded from a cement-rich mixture blended with select aggregates and pure iron oxide pigments, the units are formed under extreme pressure and vibration. Both styles can create straight, concave or convex retaining walls in either a vertical or battered configuration using a unique reversible alignment plug. When used with geogrid, walls as tall as 20' and higher can be constructed.

PHYSICAL CHARACTERISTICS

Ideal's wall products meet or exceed North American industry standards, including ASTM C1372 Standard Specification for Drycast Segmental Retaining Wall Units. Strict quality control ensures consistent strength and durability.

Fat Face: Single standard unit

Fat Face - 2/3 Scored: 2 scored units, 1 standard unit

Dimensions: 11.25"d x 8"h x 18"l

Weight: 80 lbs
Face Area: 1 sf/unit
Corner Unit: 6"d x 8"h x 15"l
Compressive Strength: 4500 psi minimum
Water Absorption: 7% maximum
Dimensional Tolerance: +/- 1/8"

Wall Batter: Vertical to 4.5° (3/4" per foot)

TECHNICAL INFORMATION & SERVICES

Contact our sales offices or visit www.PaversbyIdeal.com for design and technical information, including **WBS** Design software, **Ideal's** Contractor's Guide to Installing SRWs, and **NCMA's** SRWs Best Practice Guide. We provide design consultation, including free Preliminary Engineering Design Service, specification assistance and job-site quality review.

DESIGN CONSIDERATIONS

Ideal provides general information on design and construction. In all cases, the user should exercise diligence in determining its suitability for the site. Walls 4' and higher, terraced walls, and sites with weak soils, slopes and surcharges require special consideration and construction techniques, including the use of geogrid. These conditions require the services of a qualified soils engineer and a professional contractor familiar with wall construction. Always comply with local building codes.

GENERAL CONSTRUCTION GUIDELINES

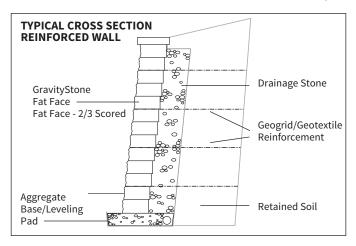
BASE: Establish a level, well-compacted, dense-graded aggregate base a minimum 8" below finished grade. Install perforated pipe as shown on the plans.

PLACEMENT OF FIRST COURSE OF BLOCKS: Block in the first course must be placed and carefully leveled front-to-back and side-to-side. For vertical walls, insert alignment plug in the forward position. For walls intended to batter, place the plug in the rear position. Fill the cores with graded stone. Place and compact dense-graded aggregate to fill the trench.

CONSTRUCTING THE WALL: Install additional courses in a running bond pattern, aligning the face of the units in a vertical position or with a 1/2" step-back as shown on the plans. Cut as needed to maintain a stagger. Insert plugs and fill cores with graded stone. Backfill and compact between and behind the units with graded stone. Repeat for each course.

REINFORCED RETAINING WALLS: When used, place geogrid as shown on the plans. Install with the design strength perpendicular to the wall. Avoid overlapping adjacent sheets. Use care not to damage grid when backfilling and compacting.

CAPPING WALL: Affix Ideal's Universal Coping[™] or natural stone coping using construction-grade adhesive. Add a 4" layer of low permeability soil behind it, cover with topsoil and add plantings.



Always wear proper safety equipment when cutting or sawing concrete products.

A white deposit known as efflorescence may appear naturally on any concrete or masonry product. It does not affect the structural integrity and will dissipate over time. Efflorescence is not indicative of a flawed product. For more information, ask for our Efflorescence Advisory.

GravityStone® Fat Face is a trademark of WestBlock Systems, USA ©2018-2019 Ideal Concrete Block Co.







RODUCT LINE SPECS

NEW PRODUCTS The Best Outdoor Living Ideas!



HIGHLIGHTS FOR 2021...



NEW BELGIUM **CURBSTONE**



NEW OMEGA 7 NATURAL STONE WALL



NEW ALLIANCE GATOR NITRO SAND & XTREME EDGE



NEW PRE-PACKAGED LOUVERED K-BANA



An added value when selling your home.







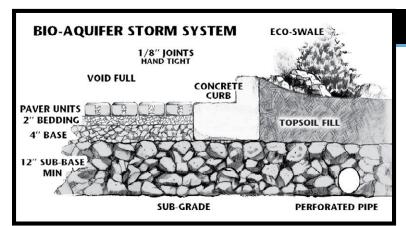








	CONCRETE BRICK		4X12 BULLNOSE (Special Order Only)	6X12 BULLNOSE	LEDGESTONE CAP WITH ARMORTEC®	12 X 24 CAP			
PAVINGSTONE SHAPE	Without Spacer Bars & Chamfered Edges	1000							
ACTUAL SIZE (inches) 2 3/8 Thick - unless noted	4 x 8	4 x 8	3 7/8 x 12	6 x 12	19 1/8 x 19 1/8 - 7 pcs. • 18 3/4 x 16 1/2 - 7 pcs. 16 x 13 3/4 - 14 pcs. • 11 7/11 x 9 3/8 - 14 pcs.	12 9/16 X 24			
WEIGHT PER CUBE (lbs.)	3,267		2,146 (Pallet Incl.)	2,146 (Pallet Incl.)		1,845 (Pallet Incl.)			
SQUARE FT. PER CUBE	121	121	78	78	2 3/8" Thick • All caps 12 9/16" Depth All four pieces are conveniently packaged on one pallet. One cube contains 7	60 Linear Ft.			
PIECES PER CUBE	540	540	234	156	corner units that can be used as a right or left corner, and as regular units. Straight, curved, circular and serpentine designs can be easily created with these four larger configurations - three trapezoidal and one square.	30			
SQUARE FT. PER BAND	20.10	20.10	26	26	With deep, bluestone-like clefts, this multi-use option can be used for pool coping, steps, wall caps and pavingstone borders.	20 Linear Ft.			
PIECES PER BAND	90	90	78	52	Linear Ft. Per Cube: 51 • Pieces Per Cube: 42 Total Weight: 1,450 lbs. (Pallet Incl.)	10			
BANDS PER CUBE	6	6	3	3	,	3			
	Natural	Standard	SPECIAL ORDER ONLY	Standard	Standard	Standard			
PRICE PER Square foot	SPECIAL ORDER ONLY		Please call for pricing and production	Color Plus	PRICE PER LINEAR FOOT	Color Plus			
	NO ARMORTEC®.		scheduling.	Premier	Premier	Premier			



PERMEABLE PAVEMENT SYSTEMS

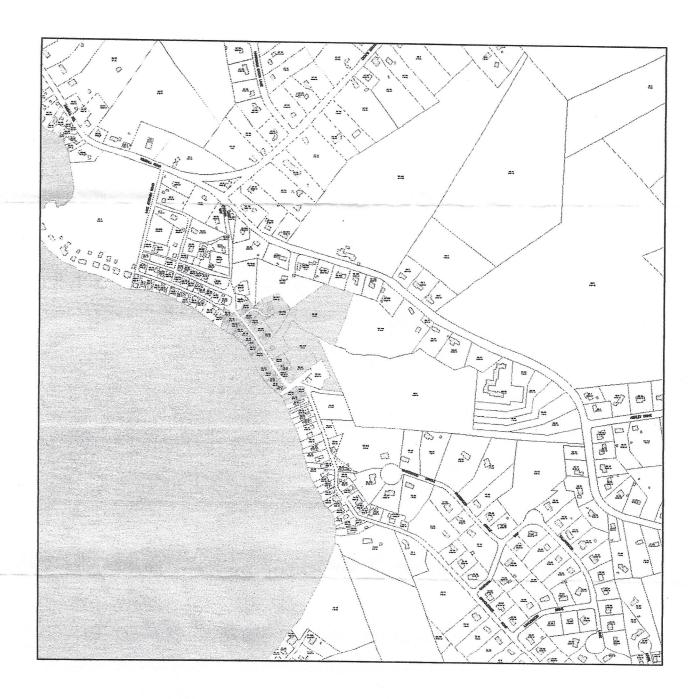
Both Ledgestone Permeable 3-Pc. Design Kits & Holland Permeable XL with ArmorTec® are specially designed for rapid removal of stormwater. Minimal openings make walking more comfortable while allowing for natural stormwater drainage and groundwater recharge. Retention ponds are eliminated. Maximum strength for driveways, parking lots and roads with key ecological benefits, curb appeal and convenient access for maintenance. Holland Permeable XL is also available in The Renaissance Collection. The Belgium 5-Pc. Design Kit with ArmorTec® is also designed for permeable applications.

Pavingstones are laid out in a variety of patterns with gravel between them. Below the pavers typically sits a 12 in. to 24 in. sub-base of stones (depth requirements vary), a 4 in. deep base of 1/4 in. to 1/2 in. clean gravel, and a 2 in. bedding sand of 1/8 in. to 1/2 in. grits (see diagram).

	LEDGESTONE PERMEABLE 3-PC. DESIGN KIT	LEDGESTONE SMALL PERMEABLE 3-PC. DESIGN KIT	LEDGESTONE PERMEABLE 6 X 9	LEDGESTONE SMOOTH PERMEABLE 6 X 9	HOLLAND PERMEABLE XL	TURFSTONE	
PAVINGSTONE SHAPE	New!			110			
ACTUAL SIZE (inches) 3 1/8 Thick - unless noted	9 3/32 x 13 5/8 - 56 pcs. 9 3/32 x 9 3/32 - 40 pcs. 4 17/32 x 9 3/32 - 72 pcs.	4 17/32 x 4 17/32 - 112 pcs. 4 17/32 x 9 3/32 - 152 pcs. 9 3/32 x 9 3/32 - 56 pcs.	6 x 9	6 x 9	4 15/16 x 9 7/8	15 3/4 x 23 5/8	
WEIGHT PER CUBE (lbs.)	3,220	3,220	3,150	3,150	2,660	2,241	
SQUARE FT. PER CUBE	92	92	90	90	76	83	
PIECES PER CUBE	168	320	240	240	224	32	
SQUARE FT. PER BAND			18	18	18.90		
PIECES PER BAND	N/A	N/A	48 48		56	N/A	
BANDS PER CUBE			5	5	4		
OPEN VOID AREA	5.44%	7.5%	8%	8%	7.85%	38.45%	
	Standard	Onyx/Natural	Standard	Onyx/Natural	CRUSADER Onyx/Natural	Natural	
PRICE PER Square foot	Color Plus		Color Plus		RENAISSANCE (Special Order Only) CALL		

State Use: 1013 Print Date: 03/17/2021 12:26		AMESBURY, MA	/ISION		le Assessed Value 3 292,800 3 201,500 3 1,000	1: 495,300	ollector or Assessor	RY	422,900	2,400	235,100	001,552	661,400 C	661 400		Purnoso/Result	Measure & List Building Permit Left hanger/measured Entry Denied		Unit Price Land Value		
State Use: 1013 Print Date: 03/1'	Assessed Value	425,300 235,100 1,000		661,400	235,1002019 1013 1,0002019 1013	630,900 Total:	a visit by a Data C	APPRAISED VALUE SUMMARY						auli	VISITY CHANGE HISTODY	D Cd	DC ML Mea ML BP Buil DC LH Left CL ED Ent TZ EI Exte		Salc Fact Adi	1.000 Total I a	lotal Land Value:
rd 1 of 1	Appraise	235,100 1,000		661,400	THE Y. Code Assessed Value Yr. Code Assessed Value Yr. 25,3002020 1013 35,1002020 1013 1,0002020 1013 1,0002020 1013	Total:	Imis signature acknowledges a visit by a Data Collector or Assessor	APPRAISEI	Appraised Bldg. Value (Card)	Appraised XF (B) Value (Bldg)	Appraised Land Value (Bldg)	nd Value	Total Appraised Parcel Value Valuation Method: Adjustment:	Net Total Anneaised Parcel Value	VISITY	Type			Special Pricing		
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54 LAKE ATTITASH RD - 300'



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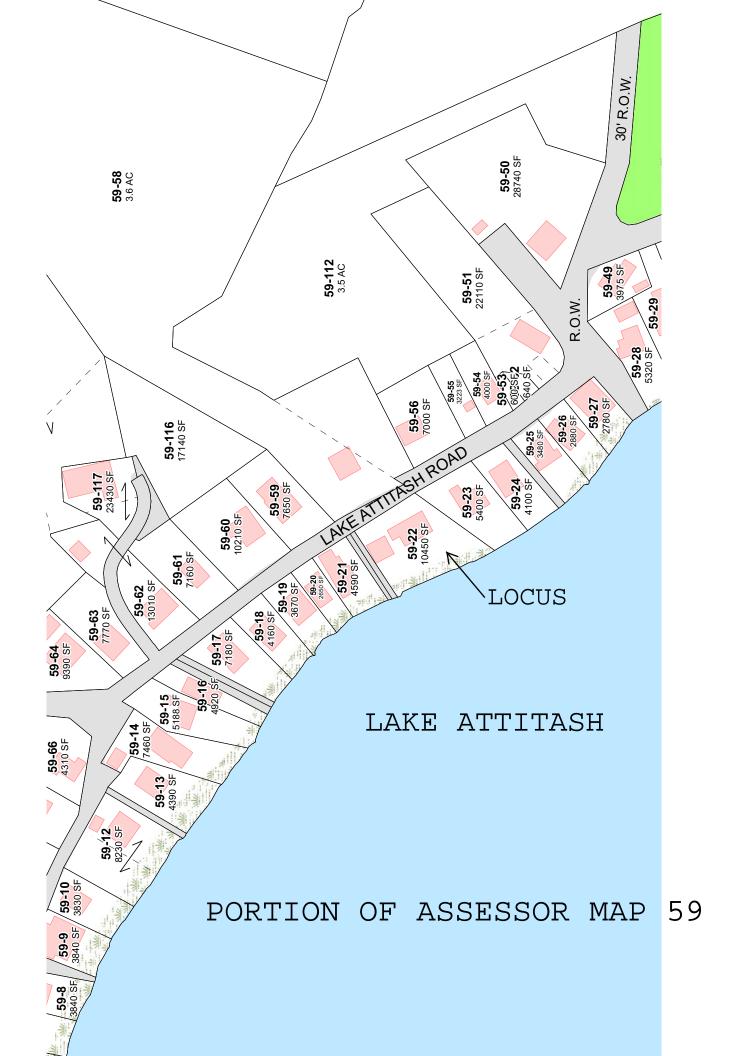


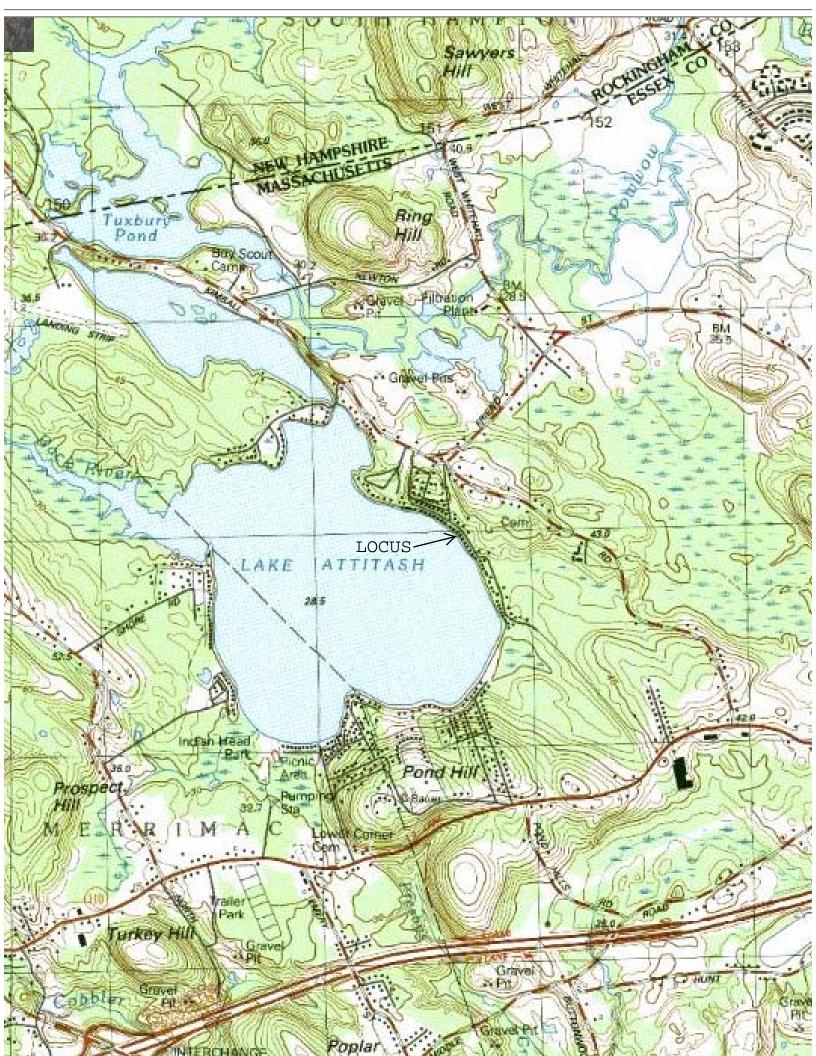
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Dana Chamelle 3/17/24







National Heritage Map from Oliver shows no special areas along the shore.



National Flood Hazard Layer FIRMette

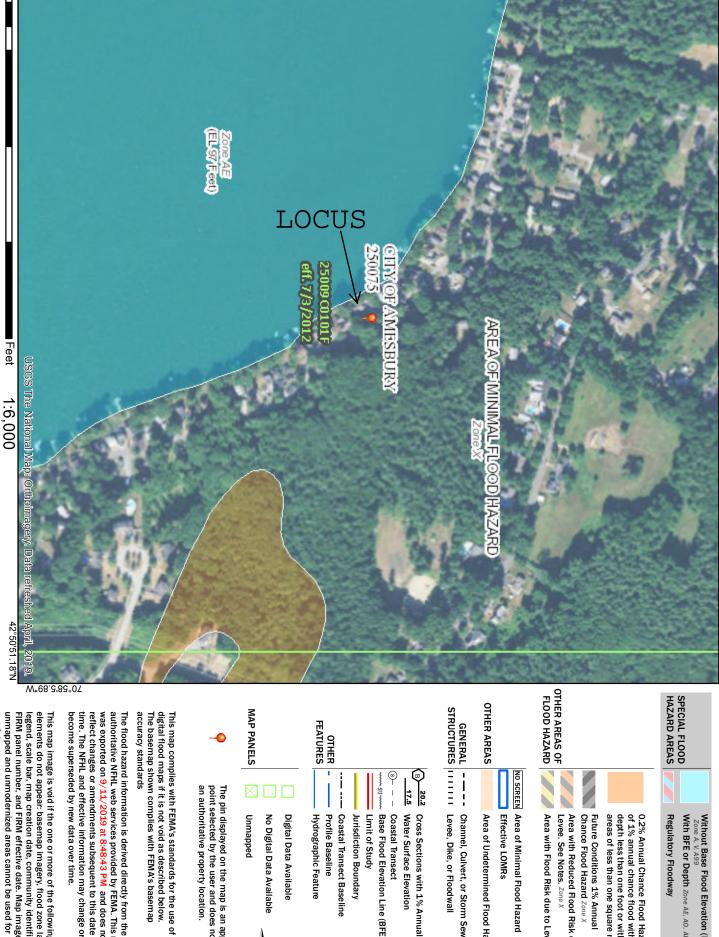
70°58'43.35"W





SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT With BFE or Depth Zone AE, AO, AH, VE, AR Without Base Flood Elevation (BFE) Zone A, V, A99

Regulatory Floodway



Levee. See Notes. Zone X Area with Reduced Flood Risk due to Chance Flood Hazard Zone X Future Conditions 1% Annual 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average areas of less than one square mile Zone X depth less than one foot or with drainage

NO SCREEN Area of Minimal Flood Hazard Zone X

Area with Flood Risk due to Levee Zone D

Channel, Culvert, or Storm Sewer Area of Undetermined Flood Hazard Zone D

Base Flood Elevation Line (BFE) Coastal Transect Water Surface Elevation Cross Sections with 1% Annual Chance

Coastal Transect Baseline Limit of Study Hydrographic Feature Profile Baseline Jurisdiction Boundary



Unmapped

Digital Data Available

No Digital Data Available

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

accuracy standards digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap This map complies with FEMA's standards for the use of

FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for was exported on 9/11/2019 at 8:48:43 PM and does not legend, scale bar, map creation date, community identifiers, elements do not appear: basemap imagery, flood zone labels, become superseded by new data over time. time. The NFHL and effective information may change or reflect changes or amendments subsequent to this date and authoritative NFHL web services provided by FEMA. This map This map image is void if the one or more of the following map

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NOTIFICATION TO ABUTTERS

UNDER THE

MASSACHUSETTS WETLANDS PROTECTION ACT AND AMESBURY WETLANDS PROTECTION BYLAW

In accordance with the Massachusetts General Laws, Chapter 131, Section 40, and the Amesbury Wetlands Protection Bylaw, you area hereby notified of the following:

The Amesbury Conserva	tion Commission will	hold a public hea	ring on
May 3, 2021 _{, at} 6:3	SOpm located at 62	Friend St with	virtual available
· · · · · · · · · · · · · · · · · · ·	me)	(hearing loca	
Amesbury, to consider a	Notice of Intent	submitted by	Robert Manseau
• /	(application)	.	(applicant)
	, to proposed wall,	patio, tree removal a	nd shore enhancements
(applicant)		ription of the propos	
#54 Lake Attitash	Road		at
Assessor Map 59	parcel 22		
(project location)			

Hearings begin at 6:30. For more information concerning the date, time or place of hearing, contact the Conservation Commission at 978-388-8110.

Arrangements to examine copies of the filling may be made by calling the Conservation Commission at 978-388-8110. Copies may be available for a fee.

Further information regarding the hearing, or the Wetlands Protection Act, may be obtained from the Conservation Commission at 978-388-8110.

NOTE: Notice of the public hearing, including its date, time, and place will be posted in Town Hall not less than 48 hours in advance.

NOTE: Notice of the public hearing, including its date, time, and place will be published in the Newburyport Daily News not less than 5 business days prior to the public hearing.

NOTE: You may also contact the Amesbury Conservation Commission or the Department of Environmental Protection (DEP) Wetlands Division- Northeast Regional Office (NERO) for more information about this application or the Wetlands Protection Act. The DEP, Northeast Regional Office can be reached at 617-654-6500.

AFFIDAVIT OF SERVICE

I, JOHN B. PAULSON, hereby certify under the pains and penalties of perjury that, on April 15, 2021, I gave Notification to Abutters in compliance with the second paragraph of the Massachusetts General Laws, Chapter 131, Section 40 and the DEP Guide to Abutter Notification in connection with the following matter:

A Notice of Intent application was filed under the Massachusetts Wetlands Protection Act and the AMESBURY Wetlands Protection Bylaw, with the AMESBURY Conservation Commission by HAND DELIVERY on April 15, 2021, for the property located at 54 Lake Attitash Road, Amesbury, Massachusetts, (Assessor's map 59, parcel(s) 22).

The form of notification and the list of abutters to whom it was given and their addresses are attached to this Affidavit of Service.

ABN.	
	April 15, 2021
Signature	Date

SO.ESSEX #290 Bk:37756 Pg:105 08/15/2019 12:24 PM DEED Pg 1/2 eRecorded

MASSACHUSETTS EXCISE TAX Southern Essex District ROD Date: 08/15/2019 12:24 PM

ID: 1309712 Doc# 20190815002900 Fee: \$2,074.80 Cons: \$455,000.00

DEED

We, John Paulson and Sandra Paulson, husband and wife, both of Merrimac, Essex County, Massachusetts,

For consideration paid of Four Hundred Fifty-Five Thousand (\$455,000.00) Dollars,

Grant to Robert C. Manseau and Debra J. Manseau, Trustees of the Manseau Family Revocable Trust, under declaration of trust dated April 7, 2015, as evidenced by a Trustee's Certificate recorded in the Essex South Registry of Deeds at Book 35798 Page 577, now of 54 Lake Attitash Road, Amesbury, Essex County, Massachusetts

With Quitclaim Covenants

The land with the buildings thereon, in said Amesbury, at Lake Attitash, being Lot No. 8 on Plan of Land in Amesbury, MA, as subdivided by Ida Tuxbury, dated October, 1945, Clinton F. Goodwin, Engineer, said Plan being recorded with Essex South District Registry of Deeds as Plan 52, in Plan Book 75,, bounded and described as follows:

Beginning at an iron pin at Lake Attitash in the center line of a private way at Lot No. 7, thence running

NORTHEASTERLY by said center line 88.75 feet to the center line of another private way; thence

running

SOUTHEASTERLY by the center line of said private way 88.26 feet to land now or formerly of

Warner; thence running

SOUTHWESTERLY by said land now or formerly of Warner and land of Watkin 113.56 feet to an

iron pin near Lake Attitash; thence running

NORTHWESTERLY by said Lake Attitash 134.37 feet to the iron pin at the point of beginning.

Said lot contains 10,450 square feet, more or less.

Subject to the rights of passage by owners of land on the aforementioned plan and others having such rights over such part of the granted premises as is contained within the private ways shown on said plan.

The premises is further conveyed subject to and with the benefit of yard and landscaping easements by and between the grantors and Steven C. Mercer, which easements are recorded at Book 37755, Page 26, respectively.

We, the grantors, being husband and wife, release to grantees all rights of homestead and other interests herein. We certify under the pains and penalties of perjury there are no other persons entitled to estates of homestead in the premises.

Meaning and intending to convey and hereby conveying the same premises conveyed to John Paulson and Sandra Paulson by deed of John Paulson dated September 30, 1992 recorded in the Essex South Registry of Deeds at Book 11517 Page 579.

Executed under seal this 14th day of August, 2019.

John Paulson

Sandra Paulson

COMMONWEALTH OF MASSACHUSETTS

Essex, ss.

On this 14th day of August, 2019, before me, the undersigned notary public, personally appeared John Paulson and Sandra Paulson aforesaid, proved to me through satisfactory evidence of identification, which were driver's licenses and personal knowledge, to be the persons whose names are signed on the preceding or attached document, and acknowledged to me that they signed it voluntarily for its stated purpose, and who made oath that the representations contained therein as to homestead rights are true.

PHILIP A. PARRY NOTARY PUBLIC

COMMONWEALTH OF MASSACHUSETTS

My Commission Expires
May 24, 2024

Notary Public - Philip A Pary My Commission Expires: 5.24-24





For Registry of Deeds Use Only



03/17/2021 10:48 COMPLI Pg 1/4



key.

Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands WPA Form 8B - Certificate of Compliance

DEP File Number:

002-1246 Provided by DEP

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Project Information

Important: 1. This Certificate of Compliance is issued to: When filling out forms on the Manseau Family Revocable Trust computer, use only the tab key to move your 54 Lake Attitash Road cursor - do not Mailing Address use the return 01913 Amesbury MA City/Town Zip Code This Certificate of Compliance is issued for work regulated by a final Order of Conditions or Order of Resource Area Delineation issued to: Manseau Family Revocable Trust Name 10.18.19 002-1246 Dated **DEP File Number** 3. The project site is located at: 54 Lake Attitash Road Amesbury Street Address City/Town 59 Assessors Map/Plat Number Parcel/Lot Number The final Order of Conditions or Order of Resource Area Delineation was recorded at the Registry of Deeds for: Property Owner (if different) **Essex South** 37974 210 County Book Page 4. A site inspection was made in the presence of the applicant, or the applicant's agent, 2.5.2021

B. Certification

Date

Check all that apply:

Complete Certification: It is hereby certified that the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.



Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of ComplianceMassachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

002-1246 Provided by DEP

В.	Ce	ertification (cont.)	
		Partial Certification : It is hereby certified that only the follow regulated by the above-referenced Order of Conditions have to completed. The project areas or work subject to this partial cebeen completed and are released from this Order are:	peen satisfactorily
		Invalid Order of Conditions: It is hereby certified that the above-referenced Order of Conditions never commenced. Conditions has lapsed and is therefore no longer valid. No regulation under the Wetlands Protection Act may commendation of Intent and receiving a new Order of Conditions.	The Order of future work subject to
	\boxtimes	Ongoing Conditions: The following conditions of the Orde (Include any conditions contained in the Final Order, such a monitoring, that should continue for a longer period).	
		Condition Numbers:	
		32	·
		Order of Resource Area Delineation: It is hereby certified resource area delineation for the above-referenced Order of satisfactorily completed	
C.	Αι	ıthorization	
	Issi	ued by:	
	Am	esbury	2.19.21
	Con	servation Commission	Date of Issuance

This Certificate must be signed by a majority of the Conservation Commission and a

https://www.mass.gov/service-details/massdep-regional-offices-by-community).

copy sent to the applicant and appropriate DEP Regional Office (See

WPA Form 8B, Certificate of Compliance • Page 2 of 3



Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands WPA Form 8B – Certificate of Compliance Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

002-1246 Provided by DEP

DEP File Number:

C. Authorization (cont.)

Signatures: Signature	Printed Name Printed Name Printed Name
Signature Signature	Printed Name Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name
Signature	Printed Name



Massachusetts Department of Environmental Protection Bureau of Resource Protection - Wetlands

WPA Form 8B – Certificate of ComplianceMassachusetts Wetlands Protection Act M.G.L. c. 131, §40

DEP File Number:

002-1246 Provided by DEP

D. Recording Confirmation

The applicant is responsible for ensuring that this Certificate of Compliance is recorded in the Registry of Deeds or the Land Court for the district in which the land is located.

Го:		
Amesbury		
Conservation Commission		
Please be advised that the Certificate of Co	mpliance for the proje	ct at:
54 Lake Attitash Road	002-1246	3
Project Location	DEP File Numb	per
Has been recorded at the Registry of Deeds	s of:	
Essex South		
County		
or:		
Manseau Family Revocable Trust Property Owner		
and has been noted in the chain of title of th	ne affected property or	ղ:
and has been noted in the chain of the of the		
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Date If recorded land, the instrument number whi	ich identifies this trans	action is:









The Massachusetts Buffer Manual

Using Vegetated Buffers to Protect our Lakes and Rivers

Prepared by the Berkshire Regional Planning Commission

For
The Massachusetts Department of Environmental
Protection

2003





Bearberry Plant Info: Learn About Growing Bearberry Ground Cover

If you live in the northern half of the United States, you've probably passed by bearberry and never even knew it. This plain-looking little ground cover, also known by the name kinnikinnik, is surprisingly popular with landscapers and homeowners who need a low-growing perennial that requires little care. If you have a need for a carefree ground cover, take a look at the bearberry. Keep reading for more bearberry plant info.

What is a Bearberry?

Bearberry (*Arctostaphylos uva-ursi*) is a low-growing ground cover that usually tops out between 6 and 12 inches (15-30 cm.). The flexible stems sport teardrop-shaped, leathery leaves in dark green. You'll find a small amount of white or pale pink waxy flowers between March and June.

Bearberry grows groups of cherry red berries that measure just under $\frac{1}{2}$ inch (1.25 cm.) across. A lot of wildlife will eat these berries, but the plant gets its name because <u>bears</u> [1] absolutely love them.

Growing Bearberry Ground Cover

If you have a large plot of poor soil and need to landscape it, then bearberry ground cover is your plant. It thrives on soil poor in nutrients and <u>sandy soil</u> ^[2] that has a hard time supporting other ground covers.

Plant it in <u>full sun</u> [3] or <u>partial shade</u> [4], in spots where it will have space to spread. While bearberry is slow to grow in the first year, it will spread rapidly



SWITCH TO NUTRO™ DOG FOOD

NUTRITION TO HELP THEM LIVE THEIR BEST LIFE.





Start new plants by clipping off stems and dipping them into <u>rooting hormone</u> <u>powder</u> ^[5], then planting them in moist sand to root. A slower method is growing bearberries by collecting and planting the seeds. Store them in the refrigerator for about 3 months before planting, and rough up the outside of each seed with a file before you bury it in the soil.

Use bearberry on <u>hillsides</u> ^[6] or over rocky ground that needs coverage. It's ideal for use as ground cover underneath shrubs or around trees. Plant it along a rock wall and it will cascade down over the edge, softening the look of your landscape perimeter. If you live near the ocean, bearberry is <u>salt-resistant</u> ^[7], so use it as a seaside ground cover.

Once established, bearberry care is minimal with exceptional to occasional watering.

Article printed from Gardening Know How:

https://www.gardeningknowhow.com

URL to article:

https://www.gardeningknowhow.com/ornamental/groundcover/bearberry/growing bearberry-plants.htm

URLs in this post:

- [1] bears: https://www.gardeningknowhow.com/plantproblems/pests/animals/bear-control.htm
- [2] sandy soil: https://www.gardeningknowhow.com/garden-how-to/soil-fertilizers/amending-sandy-soil.htm
- [3] full sun: https://www.gardeningknowhow.com/garden-how-to/info/full-sun.htm
- [4] partial shade: https://www.gardeningknowhow.com/garden-how-to/info/partial-shade.htm
- [5] rooting hormone powder: https://www.gardeningknowhow.com/garden-



II-

What Is A Lowbush Blueberry – How To Grow Lowbush Blueberries

Most of the blueberries you see in grocery stores are from highbush blueberry plants (*Vaccinium corymbosum*). But these cultivated blueberries have a less common, delightful cousin – the wild or lowbush blueberry. Its small but very flavorful berries are almost candy-sweet, with an intense blueberry flavor. Although lowbush blueberries are typically found growing in the wild or on farms in a few U.S. states and Canadian provinces, it is also possible to grow them in a home garden. That is, if you can provide the specialized growing conditions they need.

What is a Lowbush Blueberry?

Lowbush blueberries (*Vaccinium angustifolium*) are often harvested in the wild, where they are found growing in sandy forest clearings and meadows and near the edges of bogs. Lowbush blueberries are also grown in semi-wild patches that are managed by blueberry harvesters.

Most lowbush blueberries are produced in Maine, New Brunswick, Quebec, and Nova Scotia. But gardeners in a wider geographical





Lowbush blueberries are very cold-hardy plants, and most varieties grow in zones 3 to 6. Some varieties can grow in zone 2 or in zone 7.

Like highbush blueberries and other plants in the heather family, lowbush blueberries are <u>acid-loving</u> ^[1]. They require soil that is high in organic matter, and they'll grow best in sandy, well-drained soil.

Each plant can grow to between 6 and 24 inches (15-61 cm.) tall, depending on its genetics and growing site. They can, therefore, be used as a low-maintenance groundcover. The plants typically flower in spring, and the <u>berries are ready to pick</u> ^[2] in mid- to late summer. Wild blueberries are smaller than cultivated highbush blueberries, but their flavor is more concentrated.

How to Grow Lowbush Blueberries

The best sign that your land is suitable for lowbush blueberries is that you've found some already growing there. In that case, remove surrounding vegetation to encourage them to spread. Growing lowbush blueberry plants from seed or rhizomes, either purchased or collected in the wild (your own property or with permission granted), is possible too.

Plant rhizomes or seedlings 8 inches (20 cm.) apart in well-drained soil amended with peat, compost, or sawdust. Amend the soil to a pH of 4.5 to 5.2 using sulfur or ammonium sulfate. Keep the plants watered during the growing season. Remove the flowers from each plant for the first year or two to ensure strong growth of the roots.





plants' spread. Large plantings can be renovated by mowing them in the fall after they shed their leaves.

<u>Fertilize the blueberries</u> [3] yearly with an azalea/rhododendron fertilizer or another source of soluble ammonium and with a magnesium source.

Article printed from Gardening Know How:

https://www.gardeningknowhow.com

URL to article:

https://www.gardeningknowhow.com/edible/fruits/blueberries/growing-lowbush-blueberries.htm

URLs in this post:

[1] acid-loving: https://www.gardeningknowhow.com/garden-how-to/soil-fertilizers/raise-acid-level-soil.htm

[2] berries are ready to pick:

https://www.gardeningknowhow.com/edible/fruits/blueberries/tips-on-harvesting-blueberries.htm

[3] Fertilize the blueberries:

https://www.gardeningknowhow.com/edible/fruits/blueberries/blueberry-fertilizer.htm

Have any questions about this topic? Visit us at https://questions.gardeningknowhow.com to ask your questions and get friendly answers from gardening experts.



Virginia Creeper Maintenance: Growing Info And Virginia Creeper Plant Care

A vigorous and fast growing vine, Virginia creeper (*Parthenocissus quinquefolia*) is an outstanding plant for nearly any soil and light situation. Growing a Virginia creeper vine provides a nearly carefree addition to the landscape. Virginia creeper maintenance is limited to light pruning and tying up. Learn how to prune Virginia creeper vine and what problems and pests may be an issue.

Growing Virginia Creeper Vine

Virginia creeper produces one of the most spectacular color displays of fall. The five-pointed leaves are usually just an average green but turn a brilliant crimson once temperatures cool.

Virginia creeper can grow in sun to full shade, where soils are soggy to dry and even in lightly alkaline soils. The adaptability of the plant makes it suited for any site but care should be taken to keep it off wood siding and gutters. The vine climbs and adheres to vertical surfaces with aerial roots, and the weight of the plant could pull off boards and misalign gutters.

If you are trying to cover an area with the vine, plant several at once, as the plant does not branch well. Use plant ties to help it start its climb up a vertical surface. You can also use it as a ground cover, much like an <u>ivy</u> [1] or <u>vinca</u> [2].

This is a perfect plant for a novice gardener since Virginia creeper plant care is minimal and it is a very forgiving vine.





Virginia creeper is a carefree plant. It is a deciduous perennial vine with a woody stem. The plant will bloom in June to July with green inconspicuous flowers. They turn into round ball-like fruits, which persist on the vine and add interest. You can cut these off if you have children, as they are highly toxic. Birds will enjoy them if you leave them on the vine.

Watch for leafhoppers, <u>scale</u> [3] and <u>Japanese beetles</u> [4]. Treat with the appropriate insecticide to quell these types of invaders.

The plant may need supplemental water during extended periods of drought but can tolerate short periods of dryness.

The vine is remarkably versatile and vigorous. It can stand alone with little external influence but will grow thicker and more lush with annual fertilizer and shearing.

Occasional pruning is a part of Virginia creeper maintenance. When left to its own devices the vine can grow 50 to 90 feet (15-27 m.) long. Annual trimming will help keep it to a size that is manageable.

How to Prune Virginia Creeper Vine

The plant rarely needs trimming unless it is encroaching upon a pathway or structure. The vine is very forgiving, which means little finesse is needed when pruning Virginia creepers.

Remove any stems that have been broken from the main plant. Choose sharp, clean pruning shears for Virginia creeper maintenance and cut outside the main stem to prevent injury to the plant. Use plant shears to thin it back where it is getting too bushy. You can cut away small stems where they are getting unruly, but wait until early spring for large scale cutting.

The stems attach with little "feet" that can get into cracks and crevasses.

Occasionally these need to be pried away to prevent the vine from growing into areas that could become damaged. Use a flathead screwdriver or other flat



to other parts of the plant.

This North American native plant requires little maintenance and will reward you with easy-care coverage and fall color.

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About Creeping Junipers – Tips For Growing Creeping Juniper Ground Cover

If you're looking for a low-growing ground cover that thrives on neglect, give creeping juniper (*Juniperus horizontalis*) a try. These graceful, aromatic shrubs spread to fill sunny areas and they can be used as foundation plants or accents in flower borders. Use them near decks, porches and garden seating where you can enjoy their pleasant fragrance. Learn more about creeping juniper care and how to use creeping juniper ground cover in your landscape.

About Creeping Junipers

Creeping juniper is a low-growing evergreen shrub that is often used as a ground cover. It features plume-like branches that extend horizontally. The foliage often has a blue-green cast in spring and summer and plum-colored tint in winter.

Male and female flowers grow on separate plants, and the female plants produce berries. Neither the flowers nor the berries are particularly ornamental. The height varies depending on the cultivar. They may be as short as 6 to 8 inches (15 to 20 cm.) or as tall as two feet (61 cm.). Each plant can spread as much 6 to 8 feet (2 m.).





Creeping Juniper Requirements

Creeping juniper adapts to almost any soil, including those that are hot, dry and poor in fertility. In fact, these little shrubs flourish in hot, dry conditions near walls and sidewalks where most ornamentals won't survive. You can also take advantage of their drought-resistance by planting them in areas where irrigation isn't always possible.

While it thrives in clay, compacted and sandy soils where grass refuses to grow, the shrubs prefer well-drained soil and a sunny location.

Creeping Juniper Care

As with most juniper shrub care ^[2], creeping juniper is a low-maintenance plant that never needs pruning or cutting back. In fact, creeping junipers won't tolerate a lot of pruning. However, you can remove some of the plants if it spreads beyond its boundaries, though it may be easier to select a species or cultivar that naturally grows to a height and spread to fit the site you have in mind.

Watch for insects and diseases. Control <u>bagworms</u> ^[3] and webworms by removing and destroying the bags and webs. Control <u>scale</u> ^[4] insects, <u>spider mites</u> ^[5], <u>leaf miners</u> ^[6] and <u>aphids</u> ^[7] with insecticides labeled for the target insect.

Creeping juniper is susceptible to several fungal diseases that cause yellowing, browning and dieback. Cut off infected parts of the plant and use a fungicide labeled for use on junipers.





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Sweetfern Plant Info: What Are Sweetfern Plants

What are sweetfern plants? For starters, sweetfern (*Comptonia peregrina*) isn't a fern ^[1] at all but actually belongs to the same plant family as wax myrtle ^[2] or bayberry ^[3]. This attractive plant is named for the narrow, fern-like leaves and sweet-smelling foliage. Interested in growing sweetferns in your garden? Read on to learn how.

Sweetfern Plant Info

Sweetfern is a family of shrubs and small trees measuring 3 to 6 feet (1-2 m.). This cold-tolerant plant thrives in chilly temps of USDA plant hardiness zone 2 to 5, but suffers in warmer climates above zone 6.

<u>Hummingbirds</u> ^[4] and pollinators love the yellowish-green blooms, which appear in early spring and sometimes last through summer. The blooms are replaced by greenish-brown nutlets.

Sweetfern Uses

Once established, sweetfern grows in dense colonies, which makes it a great choice for stabilizing soil and controlling erosion. It works well in rock gardens [5] or woodland environments [6].

Traditionally, sweetfern poultices are used for toothache or muscle



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Tips on Sweetfern Plant Care

If you're interesting in rowing these plants in the garden, look at local or <u>online nurseries</u> ^[8] that specialize in <u>native plants</u> ^[9], as sweetfern plants aren't always easy to find. You can also take root cuttings from an established plant. Seeds are notoriously slow and difficult to germinate.

Here on some tips on growing sweetferns in the garden:

Once established, sweetfern plants eventually develop dense colonies. Plant them where they have room to spread.

Sweetferns prefer sandy or gritty, acidic soil, but they tolerate nearly any well-drained soil. Locate sweetfern plants in full sunlight or partial shade.

Once established, sweetferns require little supplemental water. These plants rarely require pruning, and sweetfern has no serious problems with pests or disease.

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Dropwort Plant Care: Information On How To Grow Dropworts

Filipendula, dropwort, meadowsweet, queen-of-the-prairie, queen-of-the-meadow; no matter what you call them, <u>dropworts</u> ^[1] in the garden are always welcome. Species of *Filipendula* are found all over the world and when you look up dropwort meadowsweet info, you'll find that each of the many common names refers to a different species of the same genus.

Dropwort Meadowsweet Info

For centuries, people learned how to grow dropworts for medicinal purposes. An infusion of dropwort tea was used to treat minor pain and headache and in 1839, scientists discovered what herbalists had known all along. It worked. Salicylic acid, aspirin to we layfolk, was first extracted from the flowers of *Filipendula ulmaria*, queen-of-the-meadow, way back then. Maybe it's the name, but you rarely read about dropworts in the garden anymore and yet they make such a beautiful and easy care addition.

Dropwort meadowsweet info is often found under the Latin *Filipendula*. Dropwort/meadowsweet is a member of the rose family. It grows in spreading clumps that usually reach about three feet (1 m.) high and three feet (1 m.) wide and it's a hardy perennial in





Information on How to Grow Dropworts in the Garden

Dropworts in the garden do double duty; first for its clusters of tiny flowers that range from white to deep pink in early to midsummer and second, for its lovely foliage sported by all species of dropwort. In the garden the long leaves, pinnately decorated with seven to nine feathery leaflets, give a fern-like appearance that contrasts nicely and softens the look of some of nature's plainer and more solid leaves. Due to their height, dropworts are usually found in the back or middle ground of the garden bed.

There's nothing extraordinary about how to grow dropworts. The plant likes the sun, but will tolerate some shade and isn't subject to any pests or diseases except the rare case of <u>powdery mildew</u> ^[2] and the dreaded <u>Japanese beetle</u> ^[3]. It does best in slightly <u>alkaline</u> <u>soils</u>, but will do fine in average, neutral soils ^[4]as well.

Dropwort Plant Care

Like most plants they prefer moist, fertile soil, but since there's nothing fussy about a dropwort, plant care is simple. Water regularly during the transplant season so the plant becomes well established and then let the rain do most of the work.

Fertilize in the spring when new growth appears, but don't get carried away. You'll want flowers as well as foliage.





tough roots into three or four clumps or keep your eye out for self-sown seedlings, which seem to have better success at germinating (and much less fuss) than from store bought seed. Dig a hole twice as large as the roots of the transplant and settle the plant to the same depth as you found it. Backfill with good, rich soil and water regularly. That's all it takes.

Whether you call it *Filipendula*, dropwort, meadowsweet, or any of the other common names by which it is known, everyone should try dropworts. Plant care is easy and the results are well worth it.

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Wintergreen Plant Care: Learn About Wintergreen Growing Conditions

Evergreen groundcovers keep the life in the landscape even in winter. Gaultheria, or wintergreen, is a sweet little plant with mint scented leaves and edible berries. It is perfect for cooler regions and is native to North America. Some tips below can help you decide if it is right for your garden as well as a guide on how to care for wintergreen.

Growing Wintergreen Plants

Any area of the garden that is shady to partially sunny make ideal wintergreen growing conditions. These low growing plants form creeping mats of glossy green foliage that turns red to bronze in winter. The decorative red berries are an added bonus that were used in candies, gum, perfume, cosmetics, teas and other uses prior to synthetic flavorings.

Wintergreen (*Gaultheria procumbens*) is a forest plant in its native habitat. It primarily colonizes areas around natives like <u>mountain laurel</u> ^[1] and <u>rhododendrons</u> ^[2] in moist, acidic soils. Much of its wild range is west of the Mississippi River, but it is also found south to Georgia. As understory plants, a low light area is best suited for growing wintergreen plants.

The species name, *procumbens*, proclaims this as a ground cover because it means "lying flat." Optimal wintergreen growing conditions are found in <u>United States Department of Agriculture zones</u> ^[3] 3 to 8 or AHS heat zones 8 to 1. Wintergreen plants perform best in light to full shade in areas with cool summers. The plants do not enjoy hot, humid conditions, suffer in drought and dislike overly wet, boggy soils.

How to Care for Wintergreen





and even established, mature plants require supplemental moisture in hot, dry summers.

No pruning or mowing is required with this plant. It also has few pest or disease issues, partly due to the pungent oils the crushed leaves and berries emit. The only concern of issue is cosmetic, where rust can discolor the leaves.

In summer, pale bell-shaped flowers appear and lead to deep red drupes. The berries may persist well into the winter if birds do not eat them or if you aren't tempted to try your hand at a sauce or canned preparation.

Wintergreen Plant Propagation

As with most berries, these plants can be propagated with their seeds. In fact, in ideal conditions, the plants may self-sow. The seeds need to be separated from the pulp and given 4 to 13 weeks cold treatment. Plant seeds in flats filled with peat and sand in early spring. Place flats in a greenhouse or cold frame until sprouts are noticed. Seeds should sprout in 1 to 2 months but plants are slow to grow.

A faster method of wintergreen plant propagation is through division. Divide plants in early spring. After planting divisions, provide average water as part of essential wintergreen plant care, unless the spring rain is consistent. Wintergreen can also be propagated by semi-ripe stem cuttings with a little <u>rooting hormone</u> [4] and a low soil medium.

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Herbaceous Perennials



Cup Plant Silphium perfoliatium

A native to central-eastern Canada to southeastern United States (zone 3-9). It is typically found in habitats such as moist meadows near rivers, low-lying woodland edges and thickets, fens and seeps, lake borders, fence rows, and along ditches near railroads. It prefers full or partial sun, and moist loamy soil. Commonly grows 4 to 8' tall and blooms yellow flowers July through September.

The cup plant is a taller species that needs ample space to grow. It will be more effective for wildflower/ native plant gardens, naturalized areas or moist, open woodland areas including stream/pond edges.



Common Blue Violet Viola papilionacea

A native species to Eastern North America (zone 3-9). Commonly found growing in yards, low woods, meadows, waste areas, and along roadsides.

Blue violet can grow 3-8" tall and prefers part shade to full shade. During the bloom period of April to June it produces blue-purple flowers and occasionally white or bicolor. It can be planted in low wood areas and is one of the first species to bloom in early spring.

Herbaceous Perennials



Joe pye weed Eupatorium maculatum

A perennial that is native to the eastern U.S. (zone 4-9). This plant grows 4-7' tall and prefers moist, fertile, humusy soils, which do not dry out. It thrives in full to partial sun and blooms light to deep purple from July to September. It is often used in landscaping for bordering, cottage gardens, meadows, native plant gardens, wild/naturalized areas or water edges.

Shrubs



Inkberry Ilex glabra

This evergreen native to eastern and south central United States (zone 5), is typically found in large suckering colonies in swamps and wet areas. Inkberry prefers full to partial sun and adequate soil moisture. It is frequently used in landscaping to be planted for borders, around foundations, and for mass plantings. It also used in wet locations and possibly in coastal areas because of its salt tolerant abilities.

Shrubs

Pinxterbloom



Rhododendron nudiflorum

A multi-stemmed, deciduous shrub found in the eastern United States (zone 4). Typically 4' to 6' tall, but can be taller. Its pale pink flowers bloom in late May. Pinxterbloom prefers full sun to part shade and a woodsy, organic, acidic soil that is moist. It also has a tolerance of dry, thin rocky soils. Used in landscaping for shrub borders, naturalistic areas and in groupings.









